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'Talent Scouting' for Sales Executives . . Pg. 6

AIR CONDITIONING HEATING & REFRIGERATION NEWS

The Newspaper of the Industry

RESIDENTIAL — COMMERCIAL — INDUSTRIAL

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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Stories of the Week
'Morning' People vs. 'Evening' People
Further Scientific Explanations
Warm Up to Warm Up
Quotes of the Week
Add Newspaper Boners

Stories of the Week

"Quick!" gasped a dashing-in customer. "I need this prescription filled in a hurry!"

Pharmacist obliged.

"That'll be $9.35," he said, handing over the pills.

Apparently misunderstanding, the distraught customer grabbed the phial, dropped 35 cents on the counter, and ran out.

"Hey, hey!" shouted the druggist. But he was too late.

"Oh, well," he philosophized, "20% profit is better than nothing."

A full stomach impedes and impairs brainwork, according to an article in the *New Physician*, by Dr. R. Robillard of Montreal.

"Overeating dulls the senses, and causes accidents."

When this news seeps down to traffic cops, we'll all be in trouble.

"Been overeating, eh?" the pull-over-to-the-curber will sarcastick.

"Honestly, officer, all I had was soup and crackers."

Editorial in the *General Practitioner* (a magazine for doctors) projects that when life expectancy moves up to 100 years, there will be five women for every man.

Think you can wait that long? Or will you care at that age?

'Morning' People vs. 'Evening' People

Dr. Wayne G. Brandstadt, Chicago physician, warns newly-married couples that adjustment may be difficult if one marital partner belongs to the "morning type" and the other to the "evening type."

Writing in the *New Physician*, Dr. Brandstadt observes that the world's population can be divided into those who "bound out of bed in the morning, eager to greet the new day" and those who "get up under protest, and are irritable until noon."

(Concluded on Page 8, Col. 1)

Experts Cite Irradiated Food Dangers

WASHINGTON, D. C. — The Army's November decision to stop work on the $7.5 million irradiated food plant at Stockton, Calif., was defended in three separate testimonies before the Senate-House atomic energy committee recently.

Dr. Walter J. Nungester, director of bacteriology at the University of Michigan's medical school; Walter M. Urbain, director of engineering research for Swift & Co.; and Richard S. Morse, director of Army Research & Revelopment, testified that the Stockton plant was premature.

Dr. Nungester attested that U. of M. studies indicated heart disease and other serious ailments of animals may be caused by irradiated food. Although he admitted the new evidence was far from conclusive, he pointed out it raised enough of a danger signal to temper any Army pro-

(Concluded on Back Page, Col. 3)

Consumer Lines Beef Up Carrier Profit for '59

SYRACUSE, N. Y. — Carrier Corp. reported a net profit for fiscal 1959 that was somewhat higher than that of the previous year.

Earnings per share of common stock were $3.62 as opposed to $3.27 in fiscal 1958. The figure for the 1958 period would have been $3.54 if all subsidiaries now consolidated had been so treated in that year, it was noted.

Other figures for the 12 months ended Oct. 31, 1959 are: orders booked, $249,750,000; sales, $263,434,000; net profit, $8,266,000.

In fiscal 1958, orders booked amounted to $243,799,000 with

(Concluded on Page 4, Col. 1)

Seek To Delay Use Of Frozen Food Code

NEW YORK CITY—"No refrigeration manufacturer is able to supply frozen food retail cases to keep products at zero degrees or lower and still keep frozen food prices reasonable," stated William Hildebrand, executive director of the New York State Food Merchants Association, at a meeting called by the Co-ordinating Committee of the Food Industries. The com-

(Concluded on Page 4, Col. 5)

Cooling Piques Builder Interest At NAHB Show

By C. Dale Mericle

CHICAGO — Industry exhibitors at the 16th annual convention and exposition of the National Association of Home Builders here last week were encouraged by the increased interest shown in air conditioning, especially heat pumps, and there was indication, too, that builders are becoming somewhat more concerned with providing better quality heating systems, it was generally agreed.

Electric heat attracted more attention, also, and there were at least 14 manufacturers exhibiting some form of electric units.

A number of new products and industry developments were featured in conjunction with the

(Concluded on Back Page, Col. 1)

Southwest Show To Open Feb. 1

DALLAS — The 2nd Southwest Heating & Air-Conditioning Exposition will get under way at noon on Monday, Feb. 1, in the Memorial Auditorium here and continue through Thursday, Feb. 4.

Show hours are noon to 10 p.m. daily. A list of exhibitors and a report on some of the products they will display were published in the Jan. 18 issue.

The exposition will be held under the auspices of the American Society of Heating, Refrigerating & Air-Conditioning Engineers which will hold its semiannual meeting in the Baker and Adolphus hotels at the same time.

Fedders Offers Furnace Lines, Pre-Charged Remote Unit

MASPETH, N. Y.—A low-cost factory charged remote air conditioner, with an outdoor section that can be installed through a wall, is part of a complete line of remote models introduced by Fedders Corp.

The firm has also entered the warm air heating business with its first series of gas and oil-fired furnaces.

Highlight of the remote line is the 2-hp. "Flex-Hermetic" model that is completely charged and tested at the factory. It features an 18-ft. length of flexible armor-covered tubing that permits the evaporator coil to be installed as much as 18 ft. from the compressor section.

The Flex-Hermetic is designed for use with three models of the new "Trophy" gas and oil-fired warm air furnaces adaptable to air conditioning.

The other remote models are more standard in design and are available in 2, 3, 4, and 5-hp. sizes in capacities ranging from 24,000 to 60,000 Bt.u. Called the "Golden Era" series, there are outdoor compressor sections, evaporator-blower sections, "A" coil evaporators, and "H" coil evaporators, for each capacity.

"The primary advantage of the 22,000 B.t.u. Flex-Hermetic unit, is its ease of installation," the announcement said. "Since it is charged at the factory, the complete installation entails not

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ARW To Observe 25th Anniversary With Convention on Cruise Ship

CLEVELAND — The Air-Conditioning & Refrigeration Wholesalers, association of firms wholesaling air conditioning and refrigeration parts and supplies, will hold its Silver Anniversary convention Oct. 28-Nov. 2 on the ocean liner *S. S. Hanseatic*, cruising in Caribbean waters, it has been announced by the ARW executive offices following a poll of the membership.

The convention had originally been scheduled for Dallas, but when the opportunity arose for the shipboard convention, a poll of the membership showed itself overwhelmingly in favor of a "hotel on the sea," said William L. Miessemer, Arizona Refrigeration Supply, Inc., president of ARW.

Plans call for the *S. S. Hanseatic* of the Hamburg Lines to sail from Port Everglades, Fla. at 3 p.m. Oct. 28, touring the Caribbean with stops in Jamaica and Haiti, returning Nov. 2 to Port Everglades. Complete details regarding reservations will be sent to ARW members within the next three weeks. In addition, invitations will be sent to 234 manufacturers to join

(Concluded on Page 4, Col. 3)

Copeland '59 Sales At Record High

SIDNEY, Ohio—Copeland Refrigeration Corp.'s 1959 fiscal year sales and net income set new record highs for the corporation, according to the yearly report just released.

Net sales for the fiscal year totaled $35,039,137, an increase of 16.2% over the previous fiscal year, which had been the previous high sales year. Net earnings after taxes were $1,427,000, or $1.78 per share, compared to $795,570, or $0.99 per share, in the fiscal year 1958.

The future outlook is bright, said the report, pointing out that unfilled orders at the end of the fiscal year were the highest ever recorded at that time, with the result that sales volume for the first quarter of fiscal 1960 reached $10,030,683, the highest ever achieved in this particular quarter.

New condensing units and motor-compressors were developed during the past fiscal year, the report notes. The condens-

(Concluded on Back Page, Col. 2)

Electric House Heating Exposition Mar. 21

NEW YORK CITY — More than 3,000 people are expected to attend the first National Electric House Heating Exposition, scheduled for March 21-23 in Chicago, according to estimates determined at a recent meeting of the Planning Committee.

The exposition will be sponsored by the Electric House Heating Equipment Section of the National Electrical Manufacturers Association and will be held in Chicago's Sherman hotel.

A symposium will be conducted in connection with the exposition with key spots on the three-day program shared by leading manufacturers, power suppliers, electrical distributors, electrical contractors, bankers, architects, builders, as well as representatives of the Underwriters' Laboratories, Inc.

Subjects will include discussions on new insulation techniques, heat losses, electric heating promotions, distribution of electric heating equipment, interpretations of the National Electrical Code for electric heating installations, unit heaters vs. central systems, standards, sales problems and opportunities.

Also, rate schedules, sales training programs for contractors and distributors, electric heating installations as viewed by investment bankers and mortgage firms, applications of electric heating equipment in different parts of the country and in various types of buildings, and a report on the future of the industry.

The exposition is open only to representatives of the trade. Stanley B. Aronson, head of the Section's Publicity Committee, is general chairman of the event. He is sales manager of Berko Electric Mfg. Corp., Queens Village, N. Y.

C. F. Kreiser, general sales manager, Edwin L. Wiegand Co., Pittsburgh, is chairman of the section.

Detroit Controls Names 3 Vice Presidents

DETROIT — Detroit Controls Div. of American-Standard has elevated three top executives to vice president, F. J. Kreissl, president, has announced.

The three are John R. Warnock, general manager of marketing; Richard L. Campbell, director of engineering; and George F. Butterfield, general manager of manufacturing.

IBR Plans Expanded, Updated Course On Heating Design, Installation

NEW YORK CITY—An updated and expanded "how to" course in the design and installation of modern hydronic heating systems will be conducted in 1960 by the Institute of Boiler & Radiator Manufacturers, it was announced recently.

The school program will start in Canada during March and in the U. S. during April.

The three-day I-B-R Hydronic Heating School will include for the first time instruction in the design of the so-called "small pipe" system.

The small pipe system, using flexible copper tubing with diameters as small as ⅜ in., was researched by I-B-R in the winter of 1958-59. It was found that flexible tubing in reduced sizes could be applied in an efficient one-pipe layout to save a substantial amount in the cost of piping materials.

According to the I-B-R announcement, the 1960 school will also include for the first time instruction in piping layout for zoned hydronic heating systems. Additionally, a new I-B-R publication, "Reduction of Installation Costs," will be introduced in time for the course.

As in the past, design and calculation problems will be discussed and worked out in the classroom. Students will design systems for one-pipe and series loop systems. It was noted that modern piping practices also will be analyzed.

Systems will be designed for a typical two-story residence, a low-cost ranch house, and a modern split-level dwelling. Service hints, piping for indirect water heating, and preparation of bids of hydronic heating systems will be covered.

I-B-R installation and calculation guides and other materials, which detail I-B-R's advanced, research-proved methods, are used as text books in the course, it was reported.

Guide H-20 (heat loss calculation) has been brought up to date and new Guide 800 (installation practices for hot water and steam heating and indirect water heating) will include data on the "small pipe" system, according to I-B-R.

Cost of all guides and materials used in the course is included in the tuition fee of $39, the announcement pointed out.

I-B-R General Manager Robert E. Ferry noted that the 1960 school will be devoted exclusively to heating.

Experience has shown, Ferry said, that students prefer to concentrate on either heating or cooling and not combine the two subjects into a single three-day course. Ferry said that I-B-R is now developing plans for a separate cooling school.

For further information about the school, write to I-B-R, 608 Fifth Ave., New York 20, N. Y.

The 1960 I-B-R Hydronic Heating School schedule:

March 22-24—Toronto, Can.; March 29-31—Montreal, Can.;

April 5-7—Albany, N. Y.; April 19-21—Boston; April 26-28—Newark, N. J.

May 3-5—Pittsburgh; May 10-12—Cincinnati; May 17-19—Indianapolis; May 24-26—Chicago.

June 14-16—Long Island; June 21-23—Philadelphia; June 28-30—Hartford, Conn.

Region 7 ARW Plans Meeting for Feb. 19

DAVENPORT, Iowa—Region 7 of the Air-Conditioning & Refrigeration Wholesalers association will hold its annual spring meeting at the Blackhawk hotel here on Feb. 19.

The banquet will be held on Thursday evening, Feb. 18. Reservations should be mailed to J. S. Kimmel, Sr. of Republic Electric Co., Box 807, Davenport, Iowa. Factory representatives are invited.

Photo - ROYAL CASTLE COMMISSARY, MIAMI, FLA.

KRAMER Presents a New Evaporator Principle

B-R unit combines all the advantages of the gravity coil with the advantages of the fan type unit. The result of years of research and development, it is the evaporator that answers the problem when the installation requires that "extra" in performance.

LOW AIR VELOCITY: Discharge velocities are no higher than a gravity coil—there are no air blasts. Ideal for installations where people must work in a refrigerated room.

NO DEAD AIR SPOTS: By distributing the B-R units over the ceiling area, even temperature and humidity conditions can be maintained throughout the area.

SPACE SAVER: Fits between the rails without hindering the movement of the stored product; it takes no usable space.

IDEAL FOR THE MEAT INDUSTRY: The B-R unit has proven very successful in the refrigeration of fresh meat. Shrinkage is cut to an absolute minimum, slime and mold are controlled, and the bloom and flavor is maintained. Ideal for carcass chilling, meat cutting rooms, meat storage rooms, aging rooms, smoked meat storage as well as pork, bacon and sausage rooms, etc.

MANY APPLICATIONS: Can be furnished with a hot gas heated pan for temperatures below 30°. Available as an "F" or "L" THERMOBANK system with or without the compressor for temperatures of 32° or lower. The B-R designs include units for Refrigerant 12, Refrigerant 22 and ammonia.

Write for Bulletin R-462

KRAMER TRENTON CO. • Trenton 5, N.J.

Over 7 Years

Crane Secures $45 Million Credit Line

DETROIT—Crane Co. has arranged a seven-year line of credit totaling $45 million with a group of 17 banks, it was announced in Chicago by Thomas M. Evans, chairman and chief executive officer.

He said an initial $20 million will be borrowed Feb. 1 for use in connection with the proposed acquisition of National-U. S. Radiator Corp. Further borrowing of up to $25 million for capital and expansion will be made in the next 20 months, Evans stated.

Earlier, National-U. S. Radiator announced that it was planning to change its name to Natus Corp. and to increase the authorized common from 1,500,000 to 5,000,000 shares.

The company announced previously that it had agreed to sell its operating assets to Crane for about $15 million.

In addition to the cash proceeds from the sale, other retained assets will give National-U. S. Radiator about $19 million in cash and securities, according to a proxy statement. This was issued in connection with a special meeting of stockholders set for Jan. 26 to vote on the directors' proposals.

If the stockholders approve, sales of the assets to Crane will take place Feb. 1.

The proxy statement pointed out that liquidation was not being considered. The proposed increase in authorized common stock, the statement said, would enable the company to acquire others through use of its stock if the opportunity should arise.

Feldermann Succeeds Father as President of Walton Laboratories

IRVINGTON, N. J. — The board of directors of Walton Laboratories, Inc. has announced the election of John B. Feldermann to the presidency of the 25-year-old humidifier manufacturing firm.

J. Feldermann

Active with Walton for more than 12 years, Feldermann has previously held positions in the purchasing, production, accounting, and advertising departments. Sales manager for Walton since 1957, Feldermann succeeds his father, the late William Feldermann, in the presidency.

A pioneer in the research and development of equipment for humidification, Walton manufactures a diversified line of humidifiers, supplying units for the residential market, for hospital use in inhalation therapy, as well as a varied line of standard and custom units for industrial applications of humidity control.

Alleged Payoffs May Result In Shift In License Granting Power

BUFFALO — Authority to grant licenses to plumbers and electricians in Buffalo may be shifted to the Municipal Civil Service Commission, it was learned.

Reports of alleged payoffs in connection with the licensing of master plumbers is being investigated by county and grand juries.

A discussion of shifting authority for testing plumbers and electricians to the Civil Service Commission was first held several months ago, well before the current plumbing investigation began.

The licenses are currently granted by the Examining Board of Plumbers and the Examining Board of Electricians. Both boards are appointed by the mayor.

Mayor Frank A. Sedita said that a study of the proposed shift is under way.

Sedita said he has discussed the matter at length with Howard J. Gleason, chief of the examining section of the Civil Service Commission.

"Gleason indicated that examinations for plumbers and electricians could be administered by his office," Sedita added.

Gleason was out of the city and unavailable for comment.

Any shift of responsibility for the trade examinations probably would necessitate a change in the City Charter.

The federal grand jury last November started an investigation of alleged payoffs for plumbing licenses.

The county grand jury started a similar investigation and several master plumbers have been called to testify. The investigation has been halted temporarily.

Recold Names C. M. Wilson

LOS ANGELES — C. Milton Wilson has been appointed general sales manager of Recold Corp.'s Air-Conditioning Div., it was announced by H. T. "Hy" Jarvis, Recold's president.

Wilson was formerly general sales manager of Anemostat Corp. of America. He is one of the pioneers of high-velocity air distribution systems and is the author of many technical articles on this subject.

He was graduated by Columbia university and is a professional engineer.

Squaw Valley, California, Site of the 1960 Winter Olympics.

Sparkling clear mountain air and a plus 6000-foot altitude make Squaw Valley a logical choice for the 1960 Olympics . . . but the resort's 109,000 square feet of skating rinks presented a real problem in refrigeration.

Because Olympic ice has to be championship-fast and smooth, it must be kept at a *constant temperature of 28°*. York* refrigeration equipment maintains this temperature despite up to six hours of intense mountain sunshine by day. The unique 550-ton Squaw Valley system can also operate as a heat pump, taking heat from freezing ice to warm other areas and to melt snow.

York engineers found that Pennsalt Isotron® 12 had the necessary purity and dryness for the exacting requirements of this job. York specifies Isotron for the Squaw Valley system, and for many of their other installations, too. Over and over, Isotron has proved dependable in the toughest jobs. Be sure . . . always specify Isotron. It's factory-sealed for your protection. Isotron, Dept. 314, Pennsalt Chemicals Corporation, Three Penn Center, Philadelphia 2, Pa.

*Registered trademark of York Division of Borg-Warner Corp.

ISOTRON
THE KEY TO MODERN LIVING

Pennsalt Chemicals
ESTABLISHED 1850

Carrier--

(Concluded from Page 1, Col. 2)

sales of $252,537,000. The net profit was $7,548,00.

At the close of fiscal 1959, the corporation had a backlog of unfilled orders in the amount of $83,707,000. The comparable figure a year earlier was $97,-256,000. A portion of the decrease was due to the sale of the Cambridge and Monrovia Aviation divisions in 1959.

Commenting on 1959 operations, Cloud Wampler, chairman of the board, said: "The outstanding favorable development was a marked improvement in the consumers' durables portion of Carrier's business, attributable in part to an unusually hot summer and a high level of residential construction.

"However, the situation was quite different in the heavier lines including so-called big air conditioning and more especially equipment such as generators, steam turbines, and air and gas compressors. Here sales, especially those of Elliott Co., were off considerably with selling prices being generally unsatisfactory."

The Carrier chief executive stated that the extensive expansion and improvement program begun in 1954 was essentially completed during the past year. With few exceptions the factories of the corporation are now thoroughly modern and capable not only of producing goods economically but also of meeting sales requirements in excess of the volume of business done in 1959, he indicated.

As for 1960, he said: "Major attention will be paid to further improvements in marketing and business research. And expenditures for advertising and sales promotion and for research and development will be increased."

ARW Convention on a Cruise--

(Concluded from Page 1, Col. 4)

with this convention.

"Our plans for the meeting in Dallas had been handled by the E. F. McDonald Co., travel and convention agency," Miessemer explained. "This company had secured the *S. S. Hanseatic* for another client for the middle of October. At the conclusion of this meeting there was an opening for the ship Oct. 28 to Nov. 2.

"An attractive package price for five-day use of the ship was presented to the ARW board of directors. In fact, based on average costs, the five days aboard the ship will run only $69 more per person than the average cost at a land hotel.

"Since 1960 is our Silver Anniversary year, there was a desire to provide something more than the usual convention. We want every member attending the convention to share in the spectacular milestone in our history. A ship convention struck us as being something unusual.

"But the board of directors did not wish to make a decision without an indication of the members' desires. A letter was sent to all members outlining the proposal and asking them to vote on the location. The vote was in favor of the *Hanseatic* by an overwhelming majority. Naturally the board followed the members indicated preference and made the change.

"This decision does not in any way reflect on the desirability of Dallas for the convention. Many members felt, however, that with the ASHRAE meeting and exposition in Dallas this year, they would not be interested in returning to Dallas within seven months.

"There was another point that was definitely taken into consideration. A convention aboard a ship provides a captive audience. All business affairs conducted by the association will run without outside interference. In this way we can plan for a better attendance at the business sessions.

"We are excited about the members interested. We realize that glamour surrounds such a shipboard convention plan, but our aim is to make this convention the most beneficial ever for our members."

Thom Muir, ARW executive secretary, stated that all plans for the convention are not firmed up at this time, but that business sessions would probably be planned on mornings and afternoons of the days on which the ship was not making port calls.

Frozen Food Code--

(Concluded from Page 1, Col. 2)

mittee is composed of a group of food trade associations, and the meeting was called to urge delay in enactment and enforcement of the proposed frozen food code proposed by the Association of Food and Drug Officials of the United States.

At the same meeting, an AFDOUS representation was told that enforcement of the code is unworkable and impractical at this time. "Although half of our stores have been built in the last five years and have modern equipment," pointed out Dr. Theodore Dubin, vice president and treasurer of Daitch-Shopwell Supermarkets "we could not afford to put in facilities called for by the proposed code in one, two, or even three years."

After hearing the appeal for delays, C. S. Brinsfield, head of the frozen food committee of AFDOUS, stated the committee had already decided that inforcement should not take place until "mid-1961 or mid-1962." He added that the committee recognizes an "administrative tolerance" concerning the zero degree ruling, but the allowed tolerance figure "is only for enforcement agencies, and not for publication."

J. J. Timpy Dies

DETROIT — J. J. Timpy, American Motors Corp. vice president and the senior member of the company's top management group in terms of service, died recently in Henry Ford hospital, following a short illness. He was 63.

An employe of the corporation and predecessor firms for 38 years, Timpy provided major policy guidance in financial matters.

Project Engineer

Midwest manufacturer has opening for an experienced air conditioning engineer capable of the design and development of package air conditioners and package heat pumps through 5 hp. Please rush qualifications and resume to BOX A6452, Air Conditioning, Heating & Refrigeration News.

HERE'S WHY SO MANY ENGINEERS SPECIFY

Phelps Dodge Copper Tube for refrigerating, air conditioning and heating units!

1 Phelps Dodge has complete control of its copper tube from original source to finished product. The copper used in Phelps Dodge tube comes from Phelps Dodge-owned open-pit mines, is smelted in Phelps Dodge refineries and fabricated in modern Phelps Dodge mills. This overall Mine-to-Market control is assurance of highest quality and finest workmanship.

2 Phelps Dodge devotes particular attention, throughout fabrication, to uniform anneal for tube flaring and careful control of die draw for close tolerance.

3 Phelps Dodge can supply maximum tube lengths and precise wall thicknesses engineered to customer specifications; straight length tube tempered to meet bending and expanding requirements.

4 Phelps Dodge multiple mill operation guarantees a steady source of tube supply to meet the needs of manufacturers of refrigerating, air conditioning and heating equipment.

It's the famous Mine-to-Market Quality Line . . . sold the quality way—through authorized wholesalers!

PHELPS DODGE COPPER PRODUCTS CORPORATION

New York, N.Y. • Los Angeles, Calif.

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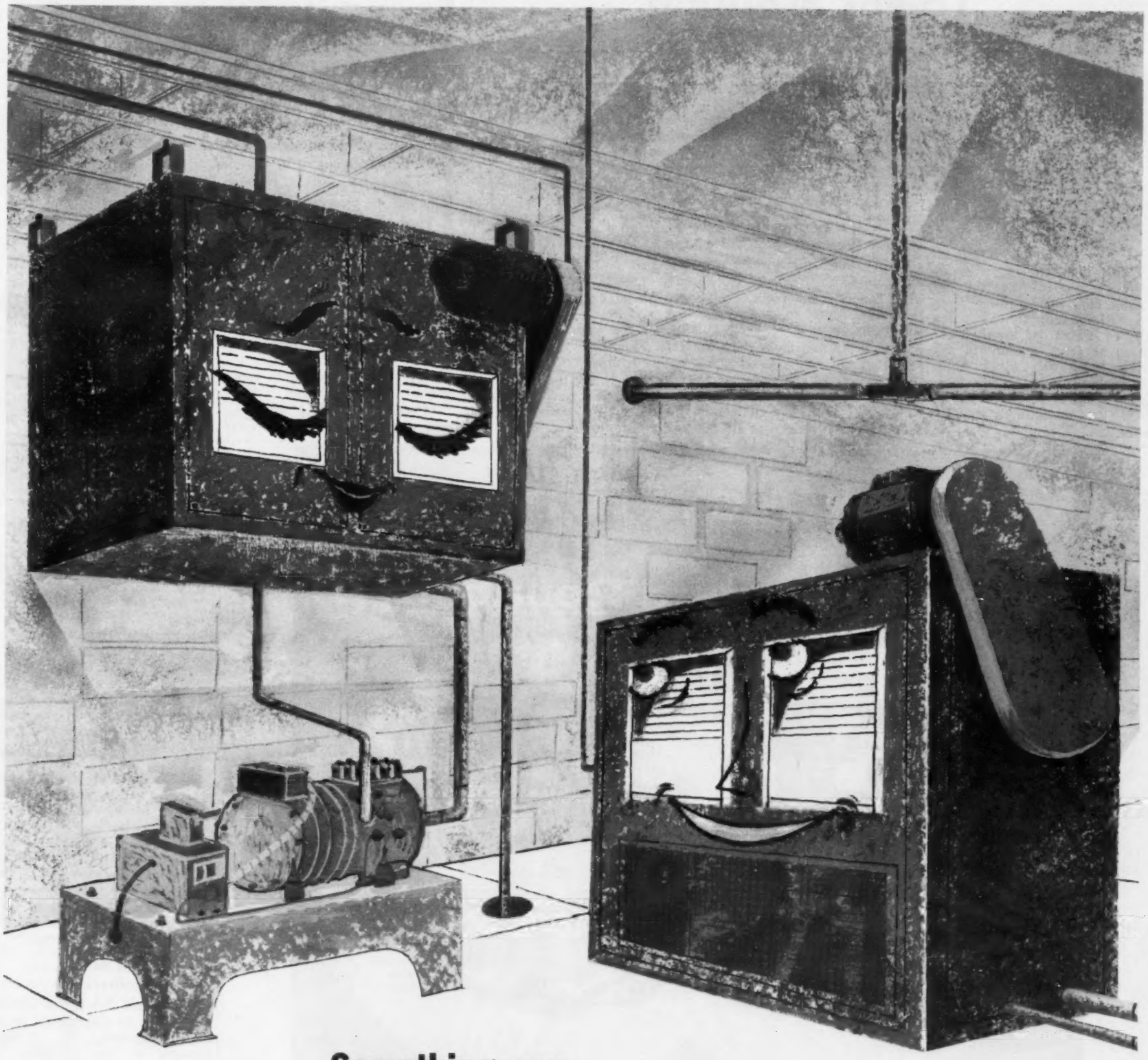


Something new for the air conditioning boys...and coils!

Now, Air Handlers from Halstead & Mitchell in 880 to 47,500 CFM Range

AH Series Air Handling Units

Halstead & Mitchell

Before you buy any Air Handler, check and compare these new H&M units, feature for feature and price for price.

See how easily H&M Air Handlers accommodate matching cooling and heating coils, with space for up to 12 rows of coil depth overall! If you like, H&M coils (from 2 to 68 square feet of face area) can be factory-installed, leaving protruding connections on either side for easy hook-up. Halstead & Mitchell makes the coils you need to match: direct expansion, chilled water, hot water, standard or non-freeze steam. Filter sections are also available.

Performance? H&M Air Handlers deliver air against static loads up to 2-inches water gauge, and do it quietly.

Construction? They're the sturdiest units in the field. Forward curved centrifugal blowers are enclosed in a heavy gauge cabinet featuring formed steel corner posts and flush mounted panels.

Price? Just ask your H&M distributor. You'll be pleased. He has all the engineering information, too. Or, you can write for Bulletin AHU-100, Halstead & Mitchell, Bessemer Building, Pittsburgh, Pa.

Air Handlers • Finned Coils • Air-Cooled Condensers • Cooling Towers • Water-Cooled Condensers

'Talent Scouting'

Distributor Proposes 5-Point Program To Recruit and Train Ambitious Young Men for Sales, Management Jobs

ATLANTIC CITY, N. J.—A "talent scouting" program to attract young, serious, ambitious men into the commercial refrigeration sales industry was recommended to commercial refrigeration equipment manufacturers by George Lucas, East Hartford, Conn. distributor.

Lucas made his suggestion at the convention of the National Commercial Refrigerator Sales Association here. It climaxed a talk in which he pointed out some of the guideposts by which his young Allied Store Engineering Corp. produced a quarter million dollar return on a $10,000 investment in six years.

Lucas proposed that manufacturers, with the aid of distributors, not only find new talent for the industry, but invest time and money to help them get started as new distributors.

5-Point Proposal Outlined

He outlined his proposal in five points:

1. Talent scout for the best possible people to come into this business.

2. Educate and train them so that they will really know what their objectives are and how to achieve them.

3. Locate suitable areas where there may be weakness in the refrigeration distributorship program; perhaps even in some areas where there are "too busy" strong dealers.

4. Finance the new dealer in such a way that he can honorably repay his obligations out of profits, and thereby be a stronger dealer for having been financed.

5. Create a new dynamic growth industry in which he believes there is the greatest potential for high caliber, reputable, qualified men to make their fortunes.

"These young men whom the manufacturers could conceivably find with existing distributors, wholesalers, and even grocers themselves who are interested in the modernization field (that is how Lucas got his start), could be trained in many ways," Lucas enthused.

"Perhaps it could be done with an established distributor on a contract basis, the contract to run for one or two years. Then the new man would be set up in his own business.

Financial Assistance For New Dealer

"The new dealer would undoubtedly have to have financial assistance from his backer. This, I propose, could be set up on a basis very similar to the financing now extended to our retail customers. They set up their own food stores and get conditional sales financing on the equipment.

"We have found that new, young dealers are very much like grocers. They are very interested in paying their bills. The right kind of men cannot help but make a go of it. They can repay all of the obligations which they incur in the initial stages of setting up their own distributorship out of profits.

"I also propose that a much greater education in store planning and engineering as well as training in the fundamentals of setting up dealers be given to factory field managers. Some are excellent in this respect, but many are pitifully lacking in both skills. Some have never even heard of the minimum requirements for establishing a dealership in this business."

Started Out In Food Business

Lucas told his fellow distributors that he started out in the food business in Boston. Amazed at the dramatic increase in business and profits after a store modernization job, he became interested in the store equipment business and joined Maintain Store Engineering Co.

After six years, he and another Maintain employe, Leonard Ianzito, set up a partnership and launched a distributorship in East Hartford, on $5,000 each and a used automobile.

Six years later—1959—that business was doing a $750,000 annual sales volume. From the two partners and a girl one day a week, the organization has grown to one owner, three salesmen, three installation men, and one girl one-half day all week.

"The first thing we did," Lucas recalled, "was to get the best lawyer we could find, the best CPA we could find, and we joined NCRSA immediately.

"We established a set of policies and we have stuck with them very firmly.

"One of our policies is to ruthlessly keep down overhead. When starting, we had limited capital anyhow and we could

What are the elements of "good management" for the air conditioning and refrigeration and heating dealer or contractor?

There are many elements that go into "good management" for this kind of a business, but it would seem that the three principal ones would be (1) the development of the kind of salespower that will develop enough sales volume to operate the company profitably and promote expansion; (2) proper control of expenditures and services to insure an adequate profit; (3) proper direction and handling of personnel to promote growth in the business and retention of good personnel.

In this series of articles the NEWS has drawn from a variety of sources to present some of the best current thinking on some specific elements that make for success.

A New Era
in
Relay Life and Reliability

NEW Bulletin 700, Type B-220A, AC Control Relay with 2 N.O. and 2 N.C. contacts.

NEW Bulletin 700, Type BX-440A, AC Control Relay can be wired for normally open or normally closed contacts.

NEW ALLEN-BRADLEY BULLETIN 700 RELAYS

Improved features set new performance standards

For years, Allen-Bradley Bulletin 700 Type B and Type BX relays have been preferred for their long life and trouble free operation. The improvements in the new Bulletin 700 Type B and Type BX relays will set new performance standards wherever they are used. Naturally they use the famous A-B double break, silver alloy contacts which always remain in perfect operating condition without cleaning or filing. The cast coil cannot be damaged by the severest atmospheric conditions.

These new Allen-Bradley Bulletin 700 Type B and Type BX relays offer even greater value and greater reliability than ever before—but the price has not been changed.

- New mechanical design gives at least 5 times greater operating life.
- New contact motion provides 10 times greater electrical reliability.
- Complete interchangeability—mounting dimensions are unchanged.
- New hermetically sealed plastic coil fits Bulletin 700 relays presently in use.
- New, stronger, movable contact crossbar—also fits old relays.
- New reinforced stationary contact blocks—interchangeable with previous design.

Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY Quality Motor Control

not see going over our heads in this respect. It was the wisest decision we ever made."

Lucas continued:

"During those formative years we would make a sale, come back to the office, type out our own invoices, rush back the following day, and try to collect from the customer.

"If not that day, we had to have the money by the end of the week. You know, the funny part of it is, we used to get it! Everyone knew we were sincere and trying to get a new business started. They really went along with us in the most wonderful way. . . .

Specialized on Equipment They Knew About

"Another of our basic policies was to stay with those items with which we had a working knowledge, such as refrigerated cases, walk-in boxes, compressors, shelving, and checkout counters.

"Absolutely no other items were for sale by us. We specialized and stuck to our guns. For us, at least, it has been a very excellent basic policy. . . .

"One of the most important aspects of our growth in this business has been the constant inspiration we have received from outstanding men like Ray Winther, Milt Schwartz, Harry Hattenbach, George Wiedemer, Roy Dreisbach, Leo Bronstein, (all distributors and members of NCRSA) and so many more.

Inspiration Important

"We consider inspiration to be absolutely the most essential ingredient of growth in this or any other business. It is inspiration we try to give our customers in making them realize the wonderful potential in their food business, in getting them to expand, remodel, and build new stores.

"Inspiration is the foundation for any growth that our salesmen may have.

"When my partner decided to leave this business three years ago and embark upon a very successful supermarket career, I was left completely alone.

Business Should Not Be Operated Alone

"Now, I cannot see operating any business completely alone. That is when a business is most vulnerable.

"By alone I do not mean just alone personally, but alone saleswise. I firmly believe that the distributor who remains alone saleswise is truly alone in every other respect.

"He may have a wonderful installation, financial, and internal organization set up. But if he does not have a continuing chain of command for his sales department, he is all alone."

Lucas' first hired salesman came from National Cash Register Co. Vic Zeller is now vice president of the company. The second salesman, Don Wennik, had previously spent 13 years as a food inspector with a railroad. With training and study he has become an excellent producer and has more than doubled his income.

The third salesman, Neal Burgess, joined the company last year after five years' selling experience. It took only a short time after learning the fundamentals of store engineering that he was on his own.

Lucas noted that he has been subcontracting with the same firms for the past six years. When a large installation comes up, he can put as many as 15 to 20 men on the job and do it in a hurry, instead of dragging it out for weeks and weeks.

Allied Store Engineering is still using the same showroom as six years ago.

"Though we are outgrowing these facilities somewhat now," Lucas declared, "we can make them do and keep our overhead down as a means of increasing our profit."

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.
Only 25¢ each.

Whirlpool Management Training Program For Dealers Ready To Get Underway

ST. JOSEPH, Mich. — Whirlpool Corp.'s dealer development program is ready to go.

Beginning early in 1960, retailers of "RCA Whirlpool" appliances will get continuing and extensive exposure to educational efforts designed to help them improve their marketing and administrative operations.

The program is being directed by John F. Ogden, a marketing and business management specialist who joined the company in May, 1959.

The result of his eight months of research and planning is a four-element program designed to be made available through distributors.

First is a 135-page "Retail Profit Management Manual" which covers all phases of appliance retailing operations from how to plan for profit, through the selection, training, and compensation of personnel, to the science of store location and the reconditioning and merchandising of trade-ins.

Second is a series of three-day dealer management clinics to be held for groups of 15 or less dealers. While these will be held beginning in February throughout the country in distributor auditoriums, professional meeting leaders will conduct the seminars for the purpose of stimulating a free and mutually valuable exchange of ideas and experience. A motion picture to be filmed at a pilot seminar in January will be shown at each clinic to encourage discussion.

Third element in the program is a series of "Business Management Bulletins," two each month, which will be mailed to distributors for their dealers.

Fourth element is a corps of trained management experts who, on invitation, will visit retail stores with distributor representatives starting in late 1960 to analyze operations and make recommendations to help owners or managers to improve their profits and sales.

Firm Files Articles

PHOENIX, Ariz. — Hermetic Refrigeration Co., Inc. has filed articles of incorporation, listing $1,500,000 capitalization to deal at wholesale and retail in air conditioning systems and parts, machinery, and equipment.

Incorporators include James S. Simon, president; Louise B. Simon, secretary-treasurer; and Max M. Strom, vice president.

COPPER TUBE

creates confidence in YOU!

"COPPER TUBE...nothing else is 'just as good'"

says the manufacturer

Copper tube lends itself to all fabricating procedures ...in the plant or on the job site. Copper tube is easy to bend, flare and form. And it's just about the most 'joinable' tube you can get. Ideal for soldering, brazing or welding—not only copper to copper, but copper to other metals, too.

Often overlooked, but certainly one of copper tube's most important advantages, is its ability to make a product or an installation *more saleable.* The reputation for quality earned by copper tube through years of dependable service is a vital asset to the product you make or the job you do.

For refrigeration lines, air conditioning coolant lines, bottled gas lines and special applications... order copper refrigeration tube, sealed at the factory to keep it clean and dry. Your supplier also has a complete line of copper water tube for water lines and other applications. Whatever the use...you can rely on copper tube to do the job *right!*

Look for "Made in U.S.A." on all copper tube. The manufacturer's brand name and this symbol also are used by many U.S. copper and brass mills to designate tube products that meet the exacting standards of American industry.

MADE IN U.S.A. TO THE STANDARDS OF AMERICAN INDUSTRY

Specify Copper Tube for Air Conditioning and Refrigeration

COPPER & BRASS RESEARCH ASSOCIATION • 420 LEXINGTON AVE., NEW YORK 17, N. Y.

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

He ventures the opinion that the second, or "evening type" has a physiological pattern in which deep sleep doesn't occur until the seventh, eighth, or ninth hour.

In contrast, adults of the "morning type" experience their deepest sleep about the end of the third hour.

Gradually awakening, while still in bed, they are ready to go almost at the alarm clock's first sound.

Dr. Philip Hench, of the Mayo clinic, Rochester, Minn. (he perfected the use of cortisone) declares that variation in the hydrocortisone content of the blood, at different times of the 24-hour day, may account for the difference between the two mutually antagonistic types.

Further Scientific Explanations

Other scientific researchers have posed interesting theories about this matter.

Peter Siegle, psychologist for the Englander Sleep Foundation, classifies people into seven basic types:

(1) The time stealer (who sets his alarm an hour early so he can turn it off and go back to sleep for awhile), (2) the can't-help-himself morning dolt, (3) the congenital morning grouch, (4) the time-table planner who is under control at all hours, (5) the high cortisone man with a built-in-alarm, (6) the gadgeteer (who takes pleasure in manipulating a variety of alarms), and (7) the born cheerful rise-and-shiner.

Very thought of having to go to work may sour any man's outlook on life in his first waking moments.

If a pleasurable activity (like golf, for example) is planned for the day, his attitude is apt to be different. This is the psychological-type late sleeper.

The guy who ordinarily has to be called a half a dozen times by his wife, however, usually can't help it. His blood chemistry is the real villain.

Siegle has a suggestion for those who find it difficult to get going on a work day. Give yourself plenty of time to dress, and eat a leisurely breakfast.

But don't make your schedule too rigid, he warns, or you will lose the permanent battle for possession of a sunny disposition.

Best, of all, he suggests, get a night-time job, or one on an afternoon shift. There are more of these than you might suspect.

Another researcher—Nathaniel Kleitman of the University of Chicago—also is convinced that inborn physical factors decide whether you are a "day" or "night" person.

Kleitman researched several hundred "specimens" to learn why some people are the early-bird type, some the night-owl variety, and others a combination of the two.

His studies indicate that body temperature is what makes the difference.

Warm Up to Warm Up

It's generally thought that 98.6° is normal body temperature. But it seems that your temperature rises and falls regularly between 96.7° and 99° during the day.

A "high" temperature makes you happy.

When your body temperature is "low"—you are, too.

Internal heat of an early bird is highest before noon. Therefore, he's a ball of fire during the morning. But, as his temperature drops in the afternoon, he begins to lose his zip.

After dark he may be well shot—especially if he's had a hard day at the office.

The night owl, on the other hand, is a slow starter.

He doesn't begin to get going until after lunch; and it's night-time before he's in high gear mentally.

Third type—lucky boy—has two temperature "highs"—one in the morning, another in the evening. He slows down in the afternoon, but gets his second breath at night.

Although we may have treated this thesis cavalierly, "Dope" can vouch personally for its significance—and that it can be a congenital species of tragedy.

A beleaguered few of us work best, think best, late-day and night. In the morning we are unfit-to-live-with ogres.

We are out-of-step with normal timetables, unfortunately—and that's a troublesome hardship.

Early birds, who seem to be in the vast majority, can be so superior and intolerant! Have pity, fellas and wives, *please.* We were born that way!

Quotes of the Week

Criticism is the disapproval of people, not for having faults, but for having faults different from our own.—*Defender.*

You can make more friends in two months by becoming interested in other people than you can in two years by trying to get other people interested in you.—DALE CARNEGIE.

When you see a father and son having a man-to-man talk today the one with the beard is the son.—MAURICE SEITTER.

Add Newspaper Boners

Miss Jurgen was warned, after her first pregnancy, not to place herself in this position again.—*San Diego Tribune.*

Lili thinks Dede is a lovely girl, but feel that they are much too young to rush into matrimony.—*New York Herald Tribune.*

Thanks for the cards and taking care of my wife while I was in the hospital.—*Kiowa* (Colo.) *Review.*

Parents of this child have enjoyed marital difficulties for several years.—*San Diego Tribune.*

The body is dying in state at the mortuary.—*Topeka State Journal.*

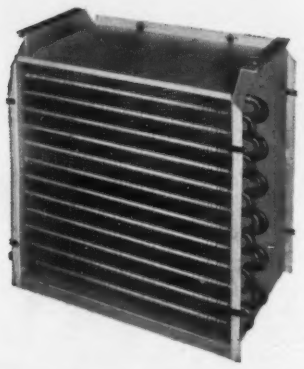
George Mathews Eyes Judd's Seat. — *Minneapolis Sunday Tribune.*

Car Crash Unites Brother, Sister In Holiday Reunion.—*Alamogordo Daily News.*

African Queen's Stern Goes on Auction Block. — *Alabama Journal.*

The Inside Story of **LARKIN** Quality

These photographs, made at various stages of production, show why LARKIN Humi-Temps are favored throughout the nation.

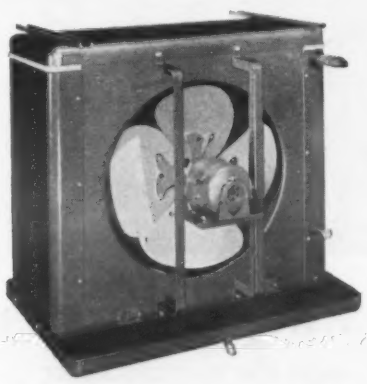


Original patented Larkin cross-fin coil with aluminum fins and staggered electro-tinned copper tubes set firmly in rigid aluminum frame. Coil has been cleaned, dehydrated, and all connections sealed to keep them moisture-free.

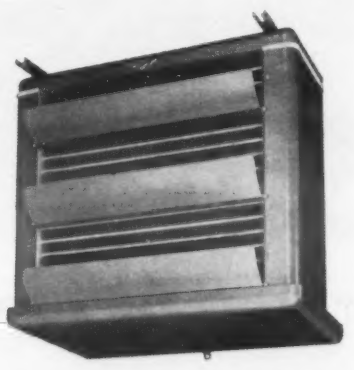
Die-stamped aluminum top, which has been etched and painted blue, with slotted steel hanger bars added. Rubber collars around lines minimize vibration from case. Note air blockers at bottom and top of case eliminating bypassed air.

Aluminum panels, painted blue, are attached with airplane-type, vibrationless, permanent fasteners. (No metal screws are used.) Rubber moldings deaden sound transmission between panels, and add to the attractive appearance of unit.

Quiet-running, slow-speed motors are rubber mounted on universal adjustable base and are equipped with thermal overload protection. Models MT-25 (2500 BTU @ 10° F TD) through MT-106 have one fan. MT-135 through MT-320 have 2 motors and fans.



Insulated non-sweat drip pan extends past back of unit and catches condensate from expansion valve. Properly balanced humidities and more-even temperatures reduce operating costs, minimize losses from dehydration, provide highly efficient operation year in and year out.



Unit is finished with addition of adjustable louvers. Quality Control Department thoroughly inspects every unit before it is shipped to customer. Wherever the name LARKIN appears, it is your assurance of finest quality.

See your wholesaler or write direct for Bulletin 1049 C

WATCHDOG OF THE NATION'S FOOD AND COMFORT — LARKIN

LARKIN COILS INC.

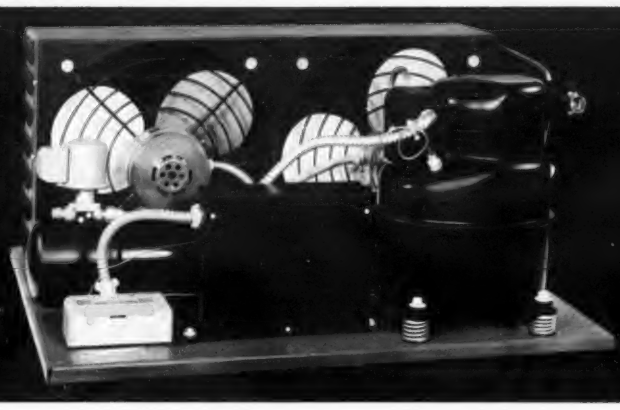
519 Memorial Drive, S.E. • P. O. Box 1699 • MUrray 8-3171

ATLANTA 1, GEORGIA

IT BELONGS WITH THE BEST. Bendix-Westinghouse compressors and condensing units literally do belong with the best—because they are the best! A quick check of the names of our customers will convince you of that. If you build or install refrigeration and air conditioning equipment you owe it to your customers to look into the Bendix-Westinghouse line of products for these applications. Turn the page for the latest information on the newest Bendix-Westinghouse condensing units available in 2- and 3-h.p. capacities.

Bendix-Westinghouse MOTOR COMPRESSORS

NEW BENDIX-WESTINGHOUSE R-12 CONDENSING UNITS ARE COMPACT, EFFICIENT AND LOWEST-PRICED ON MARKET!



Two new condensing units developed by Bendix-Westinghouse using R-12 refrigerant are now available in 2- and 3-h.p. capacities to installers of commercial refrigeration and air conditioning equipment.

The two new models, the BRYH200T and the BRYH300T, are ruggedly engineered for high back-pressure applications such as water chillers, bulk milk coolers, air conditioning installations and walk-in coolers.

Motor compressors of these new units are of two-pole design, which offers lighter total weight than the standard four-pole design, resulting in a marked reduction of shipping costs and space required for installation. These heavy-duty motors also feature the latest insulation system to provide longer motor life.

Full suction gas cooling, positive pressure lubrication and inherent overload protector are other advanced design improvements contained in the motors to assure longer, quieter and more efficient operation.

The new units, in both 2- and 3-h.p. capacities, are available in either 230-volt, 60-cycle, 1-phase, or 208/220-volt, 60-cycle, 3-phase models. Call or write direct for free literature describing these sensational, economy-priced Bendix-Westinghouse condensing units. There's no obligation.

Bendix-Westinghouse

EVANSVILLE, INDIANA

A Division of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio
Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.

G-E Program Designed To Help Builder Sell Air Conditioning as Standard Home Feature

TYLER, Texas — General Electric Co. this year is offering an ambitious builder sales program to sell the builder on air conditioning as a standard feature in his homes, according to J. J. Heffernan, manager of advertising and sales planning of G-E's central air conditioners.

"The war-time boom in the birth rate is now catching up with us, and it is estimated that about 2 million of these "war babies" each year will be getting married during the sixties, and looking for a home," Heffernan pointed out. "This demand will call for an annual 1.9 million new home starts in the sixties.

He said the G-E program is designed "to help the builder sell his homes. It is chock-full of nearly everything needed to merchandise, promote, and sell homes, not G-E equipment, necessarily."

Personalized Brochure

Builder aids include a personalized brochure, a direct mail program, traffic-generating giveaways, a selling message on "Living in an 'Air of Satisfaction'" throughout the house, and site signs, Heffernan explained, adding:

"Everything in it talks about the builder's tract, and is personalized for his tract. As the prospect walks through the display home, in every room of that house the builder can, with this material, establish his house as a quality home; as a real value; as a real buy."

What Is Included

Included in the package are:

1. A personalized invitation brochure.

"The outside cover is already printed, with the entire inside spread ready for the builder's message . . . floor plans, exteriors, subdivision map, features . . . whatever he wants to emphasize. These are available for homes with either add-on cooling, heating with cooling, or the 'Weathertron' heat pump."

2. A "free-ride" mailer that can be used as a separate mailing piece or as an enclosure with the personalized brochure.

"With it, the builder offers powerful inducements to his prospects to come out to his model home . . . free baby sitters; transportation! It has his imprint in three places . . . he fills in the date and place before mailing."

3. "Your Key" mailer.

"This is a real come-on. It offers valuable prizes in daily drawings to be held at the model home . . . the prospect brings the mailer to the house when he comes for a visit."

4. The "Treasure Chest" poster.

"This can be prominently displayed near the model home entrance with a small box behind to received the 'Your Key' mailers deposited through the slot. Additional entry blanks would be available near the 'Treasure Chest' for model home visitors who did not receive a card through the mail."

5. The follow up mailer.

"It may be the clincher. It's inexpensive, yet offers an extra incentive for buying the builder's home over that of his competitors. With the 'New Home Gift Mailer,' he can offer to pay the carrying charges, the electric bill; gas or fuel oil bill . . . maybe the commuting costs . . . perhaps he'll want to toss in shrubs, landscaping, or appliances.

"G-E is prepared to work with the builder to develop an incentive that will have the greatest impact and value in his area."

6. The "Quality Feature Story."

"This display cards tells every visitor to the model home of the quality features built into it, including G-E Heating and Air Conditioning. A literature pocket provides space for giveaway pieces on the G-E equipment or other features the builder wishes to emphasize."

7. "We're selling homes with an 'Air of Satisfaction.'"

"This is a message seen in the mailing pieces, on the site signs, and throughout the house with the 'Air of Satisfaction' tent cards . . . one for every room."

8. The "Add-On" furnace display.

"This calls attention to the G-E furnace, and how easily and quickly year-round air conditioning can be added."

9. A heavy-weight paper floor runner.

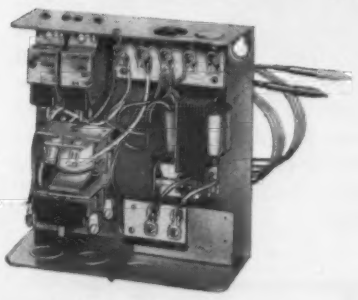
"It serves a double purpose . . . not only protecting the carpeting. but as prospects go through the house, they see the 'Live in an "Air of Satisfaction"' theme throughout."

10. A metal site sign printed in three colors, with room for the builder's imprint.

11. An "Award of Merit," which is presented to builders specifying General Electric Heating and Air Conditioning in their homes.

REPRINTS
SELLING FOR PROFIT.
By Frank Klein—Only $1.00 ea. Clip this ad and mail with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

for residential air conditioning



SYSTEM CENTER
interlocks in one unit all heating-cooling functions for self-contained systems.

In Penn's newest line of Control Centers, field-replaceable parts are easy to get out . . . easy to get in *correctly* because all internal wiring is color coded. And, these color-coded leads are equipped with *quick-connect terminals* . . . no more looping of wire or soldering connections.

There are other advantages, too! Centers are small to save space in compact 2 and 3 H.P. units. Wrap-around cases save wiring time in factory and field. And, field-installed Fan Centers have Life Guard reverse panel construction. All operating parts are easily accessible, yet are fully protected against accidental damage. Write to the Penn factory for the complete story on these new, better Control Centers.

PENN CONTROLS, INC. Goshen, Indiana
EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

On Hospital In Houston

Specifications To Allow Bidders Choice Of Electric or Gas Air Conditioning

HOUSTON, Texas — Another development in a controversy over use of electricity or gas in air conditioning the new City-County Charity hospital in the Texas Medical Center was reported by the mayor's office.

Stephen J. Richard, administrative officer to Mayor Lewis Cutrer, said the City Council "has authorized alternate specifications to be prepared to give bidders opportunity to bid on both electricity and gas.

"These alternate specifications are now being prepared, and it is hoped that we can advertise for bids within the next few weeks."

Plans prepared by the architects call for the use of electric air conditioning. The gas companies objected to this.

Early in December, the major announced he had invited Harris County officials to meet with the City Council in an effort to settle the row. Architects and engineers on the project also were invited.

Completed since last October, plans for the hospital were still being checked by city and state officials.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Kelvinator Food Spoilage Warranty Boosted to 5 Yrs.

DETROIT — A new five-year food spoilage warranty on all home freezers and the "Foodarama" was announced by Kelvinator.

E. B. Barnes, general sales manager, said there will be no separate or additional charges for the new warranty.

All procedures for the use of the new five-year warranty are identical with those for the three-year warranty previously offered on all Kelvinator and Leonard home freezers and the Foodarama.

The new warranty, providing a cumulative liability for food spoilage of $200 over a five-year period, is effective with 1960 production, Barnes said.

John H. Spence Resigns as Hussmann Service Mgr.; McCombs, Franklin Named

ST. LOUIS — A. B. Biddle, executive vice president, Hussmann Refrigeration, Inc. has announced the retirement of John H. Spence, service manager, effective immediately.

Spence first joined the Hussmann organization in 1937. He has been service manager since 1945. He was largely responsible for the development of the present field service organization, the factory warranty service, and for field liaison with the Egineering Dept.

He will be retained as a consultant for several months; during this period he will report directly to Biddle. The functions formerly under the direction of Spence have been divided as follows:

All field service engineers will now be under the direction of Kenneth S. Franklin, who has been appointed field service manager. He is directly responsible for the training and selection of field service engineers and will report to R. A. Line, manager-marketing services.

Franklin has been with Hussmann since 1956 when he was employed as a field service engineer. He was named administrative assistant to the service manager in August, 1959.

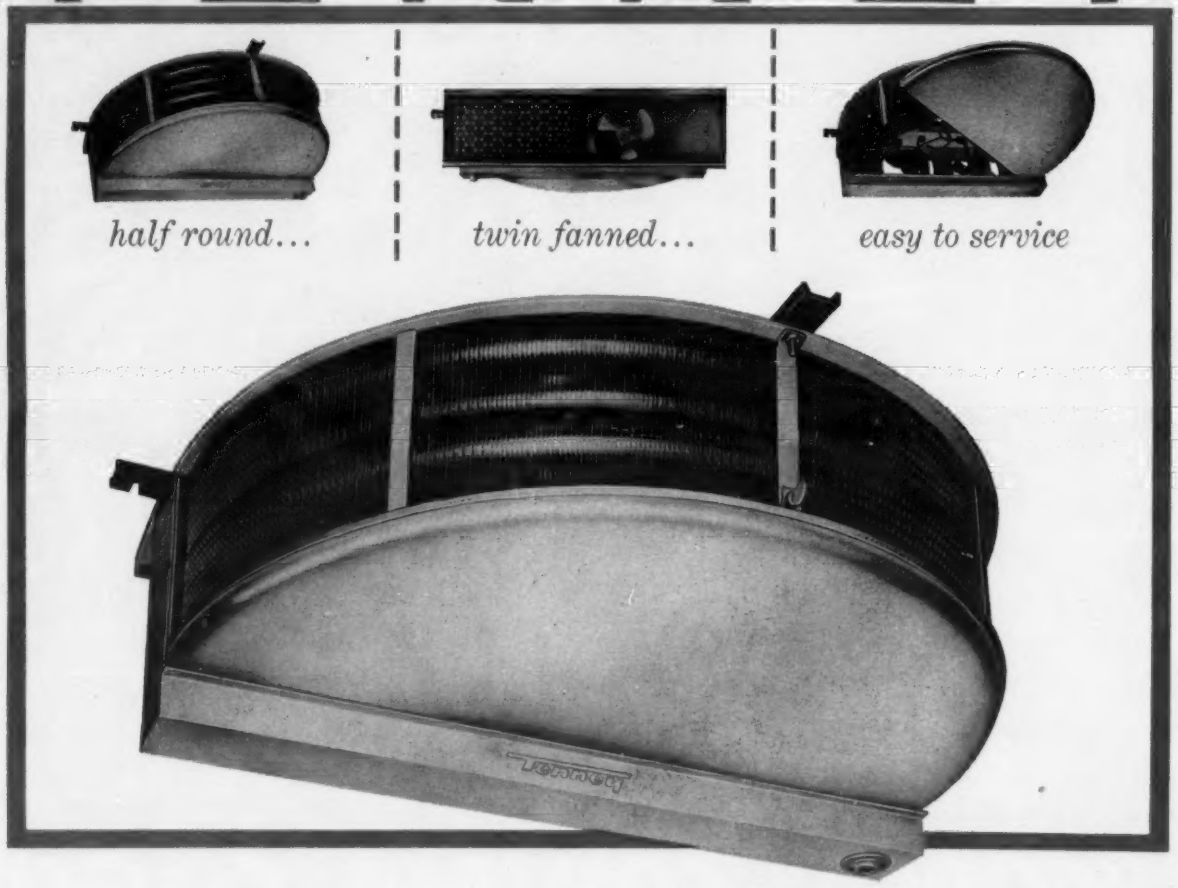
Arthur McCombs has been named manager-factory warranty and parts service. He will handle all shipments of parts, preparation of final installation instructions, and the preparation of service bulletins. He will report directly to W. A. Vormehr, vice president-manufacturing.

McCombs has been with the Hussmann organization since 1947. He has held various positions within the Service Dept. and was named assistant service manager in 1953.

The Product Engineering Dept.'s field liaison section for research and development will continue to be headed by Parker V. Phillips.

Spence has been very active in the work of a number of industry associations in recent years, and expects to continue on with this association activity, he stated.

TENNEY



Tenney TW and TWF unit coolers with ALL-ALUMINUM HOUSINGS!

More cooling power per square inch and most convenient installation with Tenney's TW and TWF unit coolers than with any other comparable units—*and now they're built of lightweight, rustproof aluminum.* True half round design insures maximum air distribution. It hugs up tight against the ceiling and its unique design allows maximum product storage. Service is so simple—flick off a thumb screw and the entire unit is open, with all parts within easy reach. You never disturb existing refrigeration, electrical or water drain lines! And in case of emergency, *one* of the unit's two fan-and-motor combinations can maintain safe temperatures until help arrives. Standard filters are optional on both units. Write for literature and technical data on these new all-aluminum TW and TWF unit coolers today.

Write for Bulletin 104-54

Engineers and Manufacturers of Refrigeration and Environmental Equipment

Tenney ENGINEERING, INC.

1090 SPRINGFIELD ROAD, UNION, NEW JERSEY • PLANTS: UNION, NEW JERSEY AND BALTIMORE, MARYLAND

Revcor Appoints Charles Wilson National Sales Mgr.

CARPENTERSVILLE, Ill. — Revcor, Inc., manufacturer of blower wheels, propellor fan blades, and housings, has announced the appointment of Charles Wilson as national sales manager.

C. Wilson

Prior to his association with Revcor, Wilson was sales director of the Illinois Testing Laboratories.

Revcor recently launched an extensive sales program and completed expanding its plant.

Cedar Rapids Area Gets Story on Silver Shield

CEDAR RAPIDS, Iowa — Heating and cooling dealer-contractors from throughout the Linn County marketing area—some 36 of them—heard the Silver Shield story during a meeting held Jan. 14 at the Sheraton Montrose hotel.

The Silver Shield program was developed by the National Warm Air Heating & Air Conditioning Association.

Arrangements for the meeting were made in cooperation with John C. Watson, chairman of the Silver Shield Action Committee and president of the Cedar Rapids Sheet Metal Contractors Association.

Purcell Promotion Heads Changes In Emerson Electric Mfg. Dept.

ST. LOUIS — Important organizational changes in the manufacturing department of Emerson Electric Mfg. Co. were announced by Henry C. Miller, vice president in charge of operations.

B. Purcell

Miller said that the tremendous growth in the company's over-all operations and the acquisition of additional manfacturing plants and subsidiaries in various parts of the country necessitated the organizational changes.

Bernard (Bud) Purcell was named assistant vice president in charge of operations and general manufacturing manager.

"In this capacity, Purcell will have direct responsibility for manufacturing operations in the St. Louis plant and will also assist in directing manufacturing policies in the St. Louis Electronics & Avionics Div. as well as in subsidiaries (Emerson-Pryne in Pomona, Calif., Emerson-Imperial in Latrobe, Pa., and Emerson-Western in Colorado Springs, Colo.) and in the Paragould, Ark., and Kennett, Mo., plants" Miller explained.

It was also announced that the Methods Div. and Standards Div. in the St. Louis plant have been combined into one new division, known as the Manufacturing Div. Don Norton was named assistant manufacturing manager and manufacturing engineer in charge of this Div.

Reporting to Norton will be William E. Roof as assistant manufacturing engineer responsible for processing, project engineering, standards, and process control and Burt Lasko as assistant manufacturing engineer responsible for tool design, tool fabrication, and machinery development, Miller added.

Edward Johnson was named production superintendent responsible for the Production Div. with all production operations reporting to him.

Purcell joined Emerson Electric in 1942 and has held various positions with the company. In 1958, he was named manufacturing manager of the St. Louis Electrical Div.

Norton joined the firm in 1955 as production superintendent in the Electrical Div. He was made acting works manager in 1957.

Roof started with Emerson Electric in 1948 as administrative assistant to the vice president in charge of operations. In 1955 he was made standards manager.

Lasko joined the company in 1956 as assistant standards manager. Johnson, who joined the firm in 1951, was most recently methods engineer in the Electrical Div.

Preheat Oven for Heat Exchanger

SPECIAL ALL-ALUMINUM heat exchanger leaves pre-heat oven prior to salt bath dip brazing at Dunham-Bush, Inc.'s new plant on Shields St. in West Hartford, Conn. New facility devotes entire production capacity to specialized heat transfer units for aero-electronic cooling. E. A. Carrell heads up this special department.

Payne's 1st Movie Pictures Modern Plant at Work

LA PUENTE, Calif. — The Payne Co. has completed a 16-mm. color-sound movie.

The motion picture, which has a running time of approximately 18 minutes, is the first to be produced by this manufacturer of heating and air conditioning equipment.

Titled, "Be Our Guest," the movie highlights a visual plant tour of The Payne Co.'s plant in La Puente.

"A complete story of the modern manufacturing process of heating and air conditioning equipment has been filmed from the unloading of coiled steel to a finished product ready for customer delivery," it was stated.

Initial showing of the film was scheduled for Payne's national sales meeting. Later, the movie will be shown to distributors, dealers, contractors, builders, utility organizations, and other groups.

Borg-Warner Makes Martin Mfg. Advisor

CHICAGO — Appointment of William F. Martin as director of manufacturing services for Borg-Warner Corp. has been announced.

Martin was formerly vice president in charge of manufacturing for Borg-Warner's Byron Jackson Div. In his new assignment, he will be responsible for promoting manufacturing efficiency and quality of product through advice and assistance on production problems, plant improvement programs, operating methods, and purchase of machine tools.

Ready to Roll on your Production line...

...COILED GM STEEL TUBING

Top refrigeration people depend on top tubing people

Coiling—available up to 2000 feet—eliminates unnecessary joints and short end waste—adapts most economically to modern production line techniques and provides better inventory control at less expense. Add GM Steel Tubing standards for quality, strength and cleanliness and schedule-meeting delivery service. You'll have the unbeatable combination that top refrigeration people know they can rely on. For detailed data write or wire GM Steel Tubing Sales Manager, *Rochester Products Division of General Motors, Rochester, New York.*

Precision Level Winding equipment produces level wound steel tubing coils. Accurate control lays each wind level with adjacent tube and insures precise coil dimension. This procedure insures easy adaptation to production line requirements at modest extra cost. Details on request.

GM STEEL TUBING BY ROCHESTER PRODUCTS

AMERICA'S LARGEST MANUFACTURER OF REFRIGERATION TUBING

2 Major Public Buildings In Indianapolis Will Get $7 Million In Air Conditioning

PITTSBURGH—Limbach Co., Pittsburgh mechanical and metals contractor, has announced receipt of $7,000,000 of construction contracts on two major Indianapolis buildings.

One of the largest contracts, in the 58-year history of the company, will be for approximately $5,000,000 on the new Indianapolis City-County building. This 25-story structure, to house the government offices of the City of Indianapolis and Marion County, will have complete heating, air conditioning, plumbing, and fire protection systems by Limbach. The company will also execute the architectural metal work.

Six blocks away, ground has been broken for a 13-story office building for the State of Indiana. This building will also have Limbach air conditioning and heating to be installed under a contract exceeding $2,000,000.

Both projects will be executed by the Cincinnati Branch of Limbach Co. which will be headquartered in a new plant now being completed. Limbach entered Cincinnati in 1957 with the purchase of a local mechanical contractor.

This new plant, part of a million dollar investment in Cincinnati, will have 8,000 sq. ft. of air conditioned office space and 28,000 sq. ft. of shop on a two-acre site. Over 2,500 tons of sheet metal and piping will be fabricated at this plant and shipped to Indianapolis.

Los Angeles Biltmore Now Air Conditioned

LOS ANGELES—The largest convention hotel in the West, the Los Angeles Biltmore, has completed installation of a gas-steam powered absorption air conditioning system as a major part of a multi-million dollar remodeling program.

All 1,500 guest rooms and public spaces, including the world-famous Biltmore Bowl, are included in the air conditioning program.

Special problem conquered by the installation was maintaining correct temperature and humidity in individual bedrooms, five large convention halls, and six restaurants and lounges, all with different load and temperature requirements.

The two 500-ton absorption machines were installed on the roof.

Wilmington Star Says

It Is Unthinkable That a Public Building In the South Would Not Have Cooling

WILMINGTON, N. C.—"It is unthinkable that a public building in the hot climes of the South would not be air conditioned.

"There is no doubt that more efficient work can be produced where employes are comfortable during the summer heat. And that is one thing the taxpayers have a right to expect —efficiency in government."

So stated the *Wilmington Star* in urging complete air conditioning of the county courthouse, rather than partial cooling as originally proposed. Said the paper in an editorial:

"Although this is not the time the average citizen thinks about air conditioning, we think that the New Hanover County Commission was wise to put its mind to the business at this time and approve the seeking of bids to air condition the courthouse.

"It is a matter that has been hanging fire for some time, and 1960 is just as good a year for accomplishing it as any.

"It was first thought to seek bids only for air conditioning the Sheriff's Dept. and the Commission's office at an approximate cost of $20,000, but it has now been decided, and rightly so, to seek bids on a complete job of air conditioning the entire building, estimated to cost $80,000.

"True, $80,000 is more than $20,000, but to air condition only two departments in the building would be on the order of a patch-work job. Eventually the other departments in the courthouse would have to receive consideration, and the cost could be higher later."

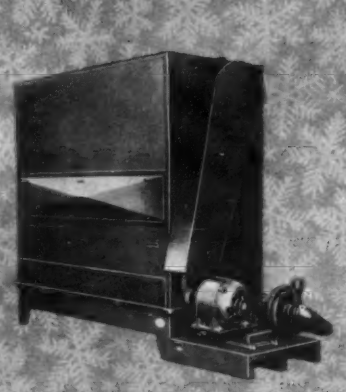
The editorial concluded: "It is a pleasure to transact business in the City Hall during the summer.

"The same cannot be said for the Courthouse."

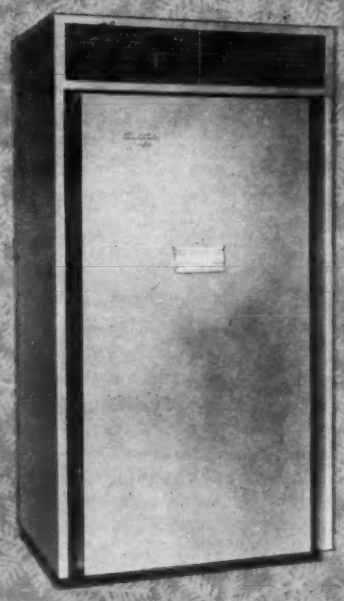
POCKET MORE PROFITS WITH

Curtis

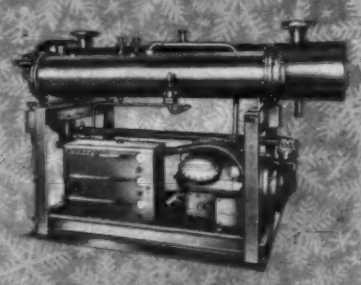
GOOD PROFIT MARGIN IN THE LUXURY LINE WITH "GOLDEN SILENCE" CIRCULATION"



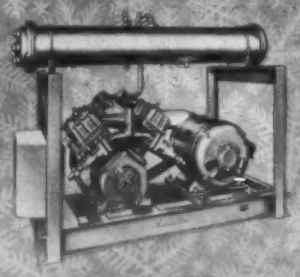
EVAPORATIVE CONDENSERS, COOLING TOWERS AND AIR HANDLING UNITS UP TO 100 TONS



PACKAGED AIR CONDITIONING UNITS 3 THRU 100 TONS



PACKAGED LIQUID CHILLERS 7½ TO 100 TONS WITH SEMI-HERMETIC COMPRESSORS



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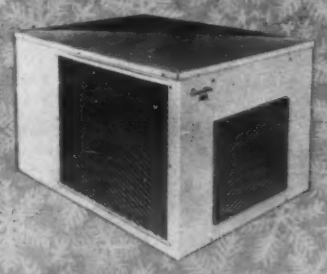

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Feb. 1 thru Feb. 4, 1960

All CURTIS air conditioning equipment is priced for profit—competitive prices on all units include a generous profit margin for you. Curtis "packaged" air conditioning equipment is all factory assembled and factory tested—it is easy to sell . . . easy to install.

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Sell the nationally advertised line that sells itself.

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Curtis
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REFRIGERATION DIVISION
OUR 105th YEAR

WRITE DEPT. 1, ST. LOUIS 20, MISSOURI

Small Town Installs 5 Commercial Heat Pumps In 10 Months

PLYMOUTH, N. C. — The installation of five commercial heat pumps within 10 months in this small town of approximately 6,000 people has indicated that such equipment is both highly desirable and competitive, according to Virginia Electric & Power Co.

The heat pumps are operating in a radio station, medical clinic, appliance store, automotive agency, and a small department store. Two pumps are water base and the remaining three are air base.

To Cool Toronto Motel

TORONTO, Ont., Can. — Air conditioning will be a feature of the $2.9 million, 177-room motor-hotel to be built in Ottawa by Perini Ltd. for owner L. Mayzel of Toronto.

ENGINEERS M E or E E

Product engineers and project engineers needed by rapidly growing manufacturer of automatic ice machines, camping equipment and room heaters and incinerators. If you are an engineer looking for growth opportunity . . . THIS IS IT! Excellent salary and fringes. Reply with resume to Personnel Manager, Queen Products Division, King-Seeley Corporation, Albert Lea, Minnesota.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

TECH CENTER

A Tech Center Review

By Frank J. Versagi

Repeatedly, the NEWS receives requests for a more permanent edition of the weekly Techcenter discussions. In some companies, files of the discussions are maintained, and engineering/technical staffs are required to read the column. Some complain that the newspaper format makes filing difficult and want reprints or compilations of the discussions.

Several reprints are available. There is a possibility that the many Techcenter discussions will be consolidated, edited, and published in book form. In the meantime, we offer the following suggestions for getting most out of the weekly columns.

Cut out each discussion, paste it on a three-ring looseleaf fillers, and keep in a looseleaf binder, arranged according to subject matter. On each sheet, write the date of publication. This serves both as a convenient reference point and as a base against which to compare several discussions on the same general subject.

To help in the organization of a permanent file, we have indexed the technical discussions which have appeared in this column since its inception.

The approach is to use the most obvious class name for the discussion. Where there is an almost equal second designation, it is used or referred to. Thus, the discussion of refrigerant breakdown can be filed either under REFRIGERANT or under CHEMISTRY, and a cross reference made in the unused designation.

All future Techcenter discussions will include such a file guide to aid in placing them.

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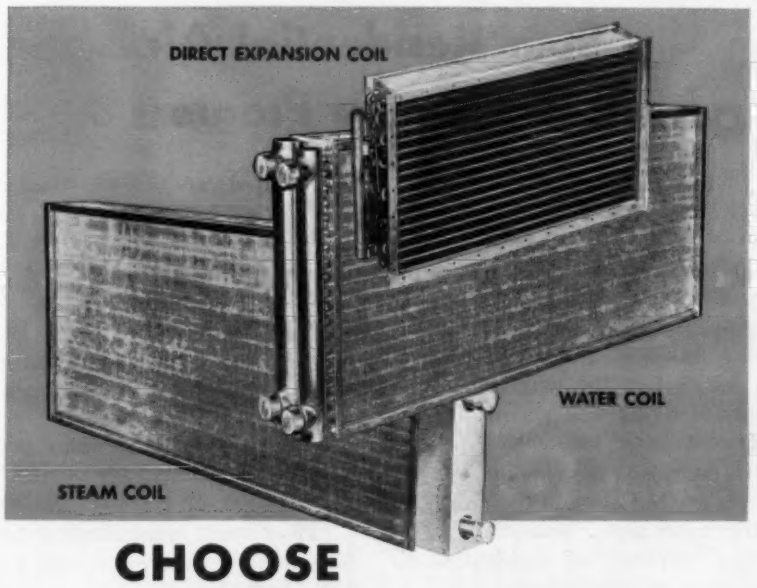
NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.



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IN ADDITION...

DIRECT EXPANSION COIL — Type DE, insures equal distribution of refrigerant with brass pressure-type distributors;

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STEAM COIL — in Types S, NFS, and NFO, has condensing tubes pitched in casing a minimum of ⅛" per foot of tube length, as well as orificed steam supply tubes, and coil tubes floating free within coil casing to prevent stress and strain on tubes and joints... maximum operating pressure 200 psig. at 400° F.

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They'll Do It Every Time

by

Jimmy Hatlo

WHEN YOU APPLY FOR A JOB ···· BUSINESS IS ALWAYS AT ITS LOWEST EBB, TO HEAR THE BOSS TELL IT····
I'M LOOKING FOR A JOB-- I'M AN A-1 MECHANIC-- KNOW ALL ABOUT TV, 'LECTRICITY AND THAT STUFF··
SORRY, MAC··· THIS IS OUR SLOW SEASON--HAVEN'T GOT ENOUGH WORK FOR THE PEOPLE I'VE GOT ON THE PAYROLL NOW··· PARDON ME··· THE PHONE···
BUT WHAT DOES BOSSO TELL THE CUSTOMERS? THAT'S A TALE OF A DIFFERENT HUE ····
YOUR TV IS ON THE FRITZ? NO··· I COULDN'T FIX IT TODAY··· NO··· WE'RE VERY RUSHED RIGHT NOW··· CAN'T POSSIBLY DO IT BEFORE NEXT WEEK···
THANK AND A HAT TIP TO ALTON RICHIE, BOX 93, TOCCOA, GA.
10-6

"That Damned Grass" May Yet Spur Residential Air Conditioning Progress

SOCIOLOGICALLY speaking, there are many historic parallels to Newton's First Law of Physics; i.e., "for every action there is a reaction."

To hitherto frustrated residential air conditioning promoters, the most interesting and promising sociological *reaction* of that nature is a reversal of the long-term trend toward suburban living and private homes, and a movement back into cities.

Fully air conditioned metropolitan apartment buildings are big news in the construction industry nowadays. And they could bellwether the "arrival" of residential air conditioning on a substantial scale.

From the end of World War II almost to the present moment relatively few city rental-apartments have been built (outside of government-subsidized "projects for the underprivileged").

Everybody wanted a home in the suburbs. G.I.'s didn't need down payments for these. Unfortunately for the air conditioning business, they needed everything else.

So air conditioning missed out on the Trek to Suburbia.

"Togetherness" in Suburbia and Exurbia, moreover, spawned a whole new cliche of ego-purchases:

Swimming pools, antique furniture, foreign cars, powered lawnmowers, outboard motorboats, country club memberships, Bermuda shorts, Bikini swimsuits, private schools for small fry, hi-fi and stereo, ballet lessons for daughter, Slenderella for Mom. . . .

You name it, they bought it. Again, air conditioning got the short end of the stick. It didn't happen to be fashionable in Suburbia, or among the new cultists of "togetherness."

Comes now the reaction (Newton's law applied to social history).

Backyard swimming pools sometimes evoke damage suits by neighbors. It turns out that boats, bikinis, and ballet possess intrinsically *belligerent* aspects, too. (They start fights.)

Nor can you always get service for your imported auto.

Children spoiled-and-neglected by the country club and private school routine sometimes become delinquents, to the dismayed amazement of their pre-occupied suburban parents.

And "togetherness," as exemplified by TV, PTA, and mass directed activities for the kids has turned out to be, collectively, a bloody bore, if not worse.

There are just too many people crowded into Suburbia today for comfort—or for the preservation of precious privacy.

Time spent commuting between job and distant home is uneconomic and inefficient, too. And then:

There's "that damned grass."

Ergo. Smart and fed-up people are exiting from Suburbia. They're moving back to inner cores of those cities which give them sustenance, provide privacy, and reinstill the truly democratic virtue of *not* apeing the Joneses.

Status symbols of the last decade are losing their charm, you see.

Concurrently, metropolitan redevelopment programs are producing attractive high-rise apartment dwellings for the disenchanted, and for refugees from that devilishly frustrating crab grass. Fully air conditioned, of course.

Renting a decent city apartment usually costs less than owning and operating and repairing an outlying home. Also, charges for air conditioned health and comfort are smaller in an apartment house than in a suburban domicile.

Immediate progress of residential air conditioning, thereupon, would seem to hinge upon continued exploitation of the apartment house boom.

When the inevitable re-reaction takes place, and apartment house "cliff dwellers" again want homes of their own, they'll be accustomed to air conditioning, and will insist upon having it wherever they move.

Thus, the long longed-for "break-though" of residential air conditioning would seem to be in sight—or at least, visible on the horizon.

Three cheers for the air conditioned apartment house boom!

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AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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VOLUME 89, NO. 4, SERIAL NO. 1,609, JANUARY 25, 1960

IF WARRANTY IS REDUCED, HOW ABOUT PRICE?

Sig Cox Refrigeration & Air Conditioning
Augusta, Ga.

Editor:

I have read with interest for several months your comments on manufacturers' five year warranty policy.

We feel, as a dealer, that it is going to be difficult to charge customers for a replacement compressor after only one year warranty. If the five year warranty is stopped, then manufacturers should price replacement compressors at a more reasonable figure. In comparing replacement compressor prices now, there is very little difference in replacement and complete new unit.

We also think that, particularly on heat pumps, the compressor warranty should extend for five years due to relative newness of all heat pump installations.

G. W. AMERSON,
Service Manager

INDIAN MANUFACTURER SEEKS AMERICAN 'KNOW-HOW'

Punj Sons Private Ltd.
New Delhi, India

Editor:

We propose to start the manufacture of room air conditioners and domestic refrigerators of sizes ranging from 5 cu. ft. to 10 cu. ft. and air conditioners of 1 hp. and 2 hp. We also propose to manufacture suitable hermetically sealed compressors.

Please inform us the name of manufacturers in America who can offer us the "know-how" for the manufacture of the above items. If possible, please inform us the names of suppliers of machinery required to manufacture the above items.

Please inform us the names of

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Germany, Australia Moving Toward Frozen Food Codes

DETROIT — Both independently and as a result of United States activity over frozen food handling, other areas of the world are giving serious consideration to frozen food codes.

In Germany, an authoritative pamphlet has been prepared for the wholesale and retail trade by Dr. J. Kuprianoff, director of Food Preservation Institute, Karlsruhe. The pamphlet describes requirements for refrigeration and temperatures which must be held during production, transport, wholesale handling, and retail handling of frozen foods.

German Standards

Some of the rules:

Temperature in transport must not rise above 0° F., -18° C. Water ice, without the appropriate addition of salt, should not be used since it cannot maintain the foods at the required temperature.

Transport documents should include a declaration of the temperature of the food at the time of loading. (Both these rules apply to shipment between the processor and the cold storage facility in the town of sales.)

During short transfers between the cold store and the retailer, temperature of food must not rise above 5° F., -15° C.

Upon receipt of the shipment, the wholesaler should determine that the temperature of the shipment has not risen more than 5.4° F., 3° C. from the loading temperature. If it has, he should enter a claim against the shipping agent.

Return by Retailer Should Be Forbidden

As a matter of principle, return of frozen food by the retailer should be prohibited, since there is no assurance that the product has not been thawed and refrozen.

The retailer must schedule the time and quantity of his purchases to provide optimum handling. All goods must be stored immediately in a low temperature cabinet. Surplus must not be held in delivery cartons, since they will not hold the necessary temperature.

Storage temperature must be checked twice a day. Temperature at the center of the frozen foods should be 0° F.; should never exceed 5° F., even for very short periods.

Care should be taken to sell packages in the order in which they are placed in the cabinet.

In the event of a power failure or other cause of temperature rise, the contents of the cabinet should be sold as soon as possible and any thawed goods sold to restaurants, institutions for immediate use.

Under no circumstances should chilled food be stored in the same cabinet with frozen food, since such items will raise the temperature of the frozen food.

Australian Activity

In Australia, the Council of Australian Food Technology Associations, CAFTA, has decided to proceed with the preparation of a Code of Practice for the Handling of Frozen Food. Present plans call first for concentration on wholesale and retail distribution of frozen foods; production will be considered at a later time.

With the growing use of frozen food, the demand for a code of practice has been increasing from public health authorities, state and municipal.

As a first step, CAFTA hopes to produce a list of "Do's and Don'ts" covering handling from manufacturer to retail sale. Australian authorities are following with great interest the developments in the United States now that the Association of Food and Drug Officials of the United States has adopted a code to serve as a guide for individual states. (April 20, 1959 NEWS).

Panama Outlook Good, But Rough Marketing Practices Cause Trouble

PANAMA CITY—Though the outlook is good for commercial refrigeration and air conditioning in the Republic of Panama, current marketing practices are rough, R. A. Barham, sales manager of Cool Air, Inc., Carrier distributor here, indicates.

Particularly in commercial refrigeration equipment, the price level of American equipment is allowing European competition to work in on the market, he noted.

Panama represents a limited market, Barham explained, both because of small population and high cost of electric power.

Fly-by-night companies and individuals selling and installing equipment at cut-rate prices are making things tough for the reputable distributors and contractors, Barham asserted.

Barham blames manufacturers and export distributors, at least partially, for selling to anyone who can send them an order.

"We believe they should be more careful to whom they sell," Barham declared. "They must consider the fact that a reputable contractor or distributor may offer their equipment at a later date, only to have it turned down by the customer.

"Another problem that hurts the good distributor badly," he continued, "is the influx of old units purchased at cut-rate prices in Miami and other cities by individuals who dump them on the market here at a price just a little above our cost.

"This prevents the distributor from making volume sales and forces him to give up the line. Very naturally, the distributor who does not make a profit on a unit is not going to stock and give service."

Barham suggested that the American manufacturer could give the overseas distributor more technical help. This would include sales representatives who know the technical end of the business, helping train service and installation personnel, and extending credit facilities to 90 to 120 days sight draft.

German Hospital Can Create Varied Humidities

MUENSTER, West Germany —A unique air conditioning system permits a new ear, nose, and throat hospital here to simulate either damp, tropical, or dry, desert type conditions in treating Westphalians for weather-connected troubles.

now your choice of VERTICAL or HORIZONTAL AIR FLOW AIRCON CONDENSERS

Now McQuay offers you your choice of either vertical or horizontal air-flow Aircons in eight models with capacities from 7½ to 50 tons in a single unit. Unlimited tonnage is available with multiple installations. The vertical air-flow Aircon is designed to meet the needs of the architect as well as the consulting engineer. With an extremely low silhouette, the vertical Aircon is rarely visible when installed on a roof. In addition to this, the vertical air-flow Aircon is not affected by prevailing winds and therefore does not require a wind deflector.

You not only get more models and more capacity, but you get more performance, because McQuay Aircons have the exclusive McQuay Ripple-Fin coils—the finest and the standard of the industry.

The McQuay "Seasontrols," automatic head pressure controls, are available as accessories, and modulate the condenser capacity in accordance with the weather for proper operation at all times. For complete information, call the McQuay representative in or near your city, or write McQuay, Inc., 1607 Broadway St. N. E., Minneapolis 13, Minnesota.

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MAKE THE SEASONS COME TO YOU

Refrigerator-Freezer Features Compactness

NEW HOTPOINT 18-cu. ft. combination refrigerator-freezer which is said to fit into the same floor space as a 12-cu. ft. refrigerator, is the deluxe style leader in its 1960 refrigerator-freezer line. Discovery of new insulation material 50% thinner is said to make this possible. Refrigerator is 11.5 cu. ft. and freezer is 230 lb. 6.6-cu. ft. size. Refrigerator walls in this model only 1½ in. thick compared to 3 in. on previous models. Shelves and vegetable mart in refrigerator swing out; freezer basket swings out too. Refrigerator and freezer has new "no noise-no fan" system to defrost refrigerator and freezer. Other features include pull out egg rack, foot pedal freezer door, and flush wall installation.

Whirlpool Refrigerator 'Purifies Air'

● A "climate for food that's purer, fresher, colder — without frost or defrosting" is the "big news" in its new 1960 "RCA Whirlpool" electric refrigerator and freezer lines, according to Whirlpool Corp., Dept. AH&RN, St. Joseph, Mich.

Refrigerator line features were listed as including a new air purifying system, quick chilling jet-cold-shelf, new constant-cold reserve, automatic "Ice-Magic" ice cube maker, and "million magnet" door.

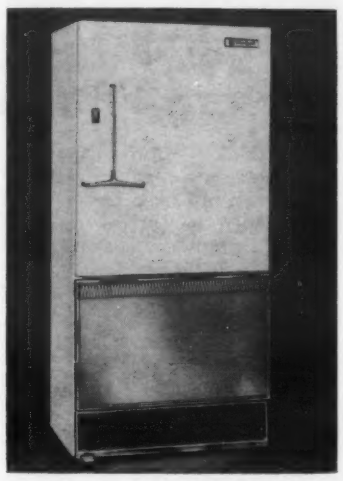
There's no frost — ever — inside either the refrigerator or freezer compartments in three of the 11 refrigerator models, the company said. Placement of frost collecting coils outside the food storage area has made this feature possible, it was explained.

The principle of air purification used in atomic submarines "is constantly purifying and refreshing air in models GM-15BCM and GM-13BCM of the new line," the company pointed out.

"Utilizing the unique filtering properties of activated carbon, this exclusive air purifying system absorbs objectionable odors (up to 97.5% can be eliminated) in much the same way a sponge soaks up water—except odors are never released once trapped. Each activated carbon filter lasts a full year without replacement under ordinary use."

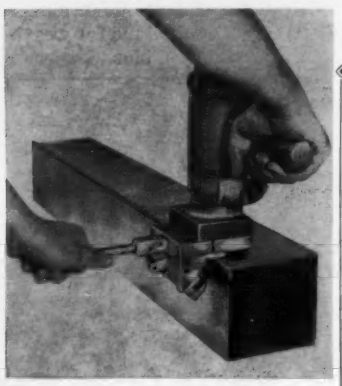
An exclusive jet-cold-shelf is featured in both units mentioned above as well as models GS-14T, GS-14TCM, and GI-13B, it was stated. Hollow in the center, the jet-cold-shelf also channels cold air from the air purifying filter directly to the door shelves.

Constant cold reserve featured in models GI-13B, GM-13BCM, and GM-15BCM, "circulates super cold air into the food compartment instantly as needed without time lag waiting for coils to chill after the door is opened and closed," according to Whirlpool.



Both the refrigerator and freezer compartments in the three models listed above also have independent control systems.

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.



'Lectro-Lok' Speeds, Quiets Duct Fabrication

● With its versatile new "Lectro-Lok" Pittsburgh lock roller, metal ducts can be fabricated on the job "quickly and quietly," according to Millers Falls Co., Dept. AH&RN, Greenfield, Mass.

"Lectro-Lok's rugged, simple mechanism rolls smooth, tight seams—each perfectly formed and even—on ducts in a fraction of the time needed for hammering," the company said. "It may be used on 18 to 28 gauge metal with speeds ranging from 18 to 30 f.p.m. depending on the thickness of the metal being fabricated.

"This tool is compact (12 in. over-all) and lightweight (only 15 lbs.). It may be used with efficiency in the shop, but the greatest advantages come from its portability and ease of use right on the job.

"Material for ducts may be taken to the site flat or in space-saving nested sections, then rapidly assembled as needed. Thus the problem of trucking and storing bulky finished ducts is eliminated."

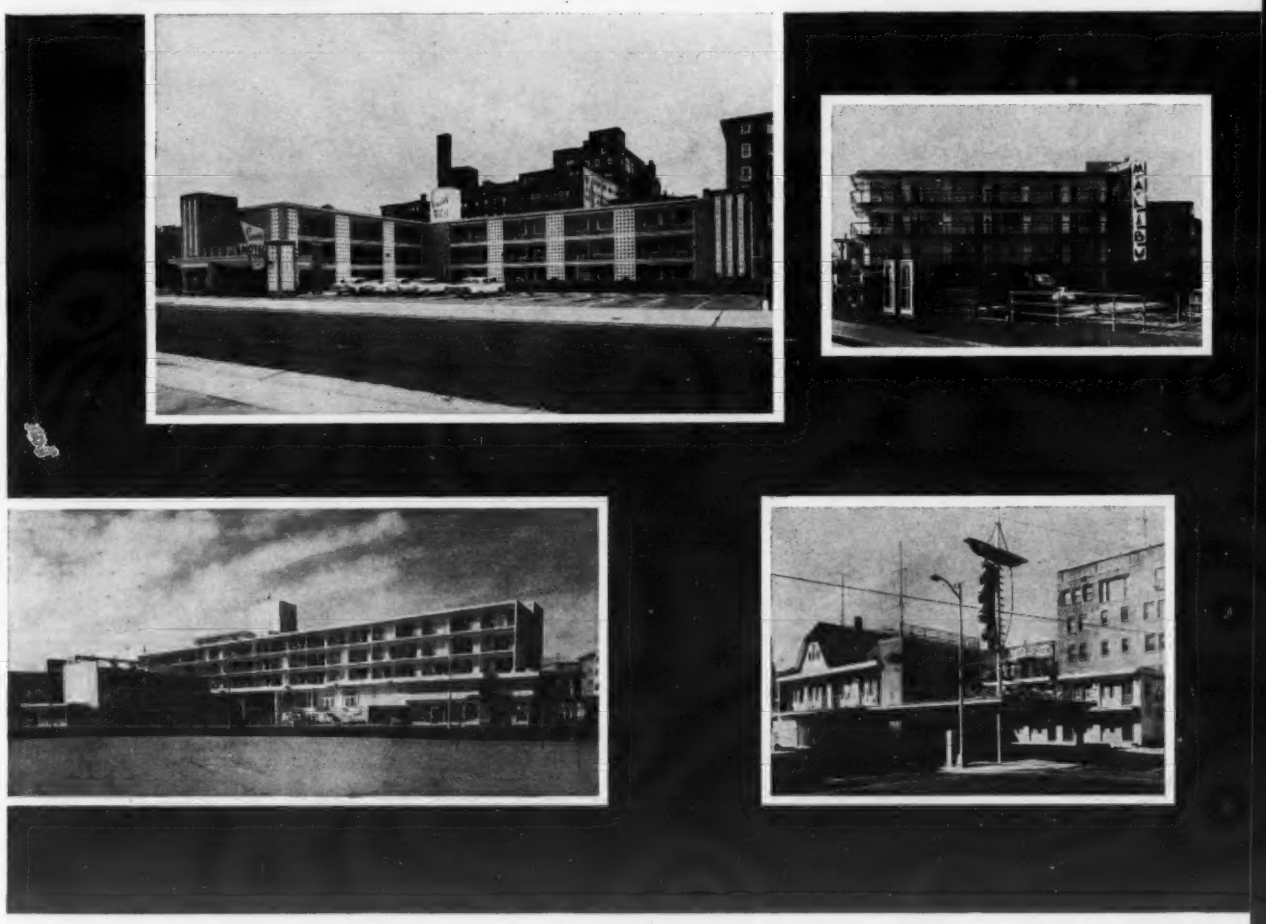
The Lectro-Lok is priced at $225 complete with slide for 5/16 in. pocket seams. Interchangeable slides for ⅜ in. or ½ in. pockets may be purchased as accessories at $17.50 each.

'Rule-Wallet' Made of Lightweight Leather

● A new, lightweight leather pocket case which holds engineer's slide-rule, pen, and pencil firmly in shirt or pocket is available from Remco Products, Dept. AH&RN, 1641 South Ave., Rochester 20, N. Y.

A compartment in back holds note-pad or letters. The slim "Rule-Wallet" is furnished in genuine pigskin, the company said. The case, furnished empty, holds any pocket slide-rule of conventional make or size. Price is $3.95 ppd.

Acme ... the **practical** approach to

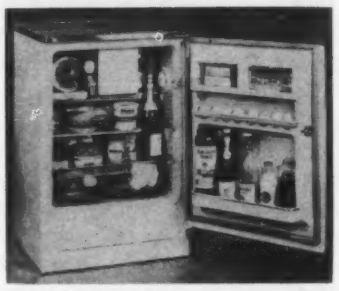


Acme is the word for air conditioning

Here you see a representation of just a few of the many fine motels in and around Atlantic City that feature Acme air conditioning equipment. Fact is, in Atlantic City alone there are 25 quality motels so equipped and on the several turnpikes leading into the City you'll find at least 25 more . . . ranging in size from 25 units to more than 250 and in value from a quarter of a million to almost two million dollars. And in every one of these motels the "heart" of the year 'round comfort conditioning systems, the chillers and the cooling towers, bear the name Acme . . . the name that has been synonymous with quality and dependability in air conditioning and refrigeration equipment since 1919. Yes, "the word" for air conditioning in Atlantic City motels is *definitely* Acme.

Why Acme? Well, the architects and engineers who recommended Acme, the contractors who installed the equipment, the motel owners who are using it could tell you best. But the answer is readily available simply by "adding up" some of the advantages of Acme equipment . . . space-saving, cost-reducing compactness . . . easy to install, factory-assembled "packaging" . . . smooth, quiet, efficient operation . . . minimum-maintenance simplicity and ruggedness . . . convenient, protected controls . . . factory tested and certified performance reliability. These Acme "pluses" and many more are the reason why Acme systems are the answer to air conditioning for multi-room buildings of *all* types . . . motels, hotels, apartments, hospitals, offices. Call your nearby Acme sales engineer.

Uropa Adds 2 Small Refrigerators



● Addition of two new models to its line of "Fridgette" refrigerators—the Fridgette Utility #38 with a 3.8-cu. ft. capacity and the Fridgette Space Saver #43 with a 4.3-cu. ft. capacity—has been announced by Uropa International, Inc., Dept. AH&RN, 16 West 32nd St., New York City.

Both models are West German imports. They feature a "superquiet" compressor motor, according to the company, and both have glass fiber table top work surfaces; "deluxe" interiors; inner door shelves for butter, eggs, cans, bottles, etc.; specially designed magnetic type positive locking action; crispers; and heavy "See-Thru" glass shelves.

The Utility model measures 32 in. high by 22 in. wide by 23½ in. deep and the Space Saver measures 34 in. high by 22 in. wide by 23½ in. deep. Plastic legs are available to bring both models up to a height of 36 in.

Suggested list prices are $159.95 on the Utility model and $169.95 on the Space Saver, both in white. (Crispers are optional at $3.95 each. Plastic legs optional—"under $5.") Both Fridgette models may be had in decorator pastel shades and walnut or mahogany wood grain finish at a slight extra charge.

Uropa's Fridgette line of imported refrigerators will be further enlarged to include seven new models within the next few months. The complete line will range from a 1.7-cu. ft. capacity model up to a 7.5-cu. ft. capacity model.

Blower Wheels Highly Resistant to Corrosion

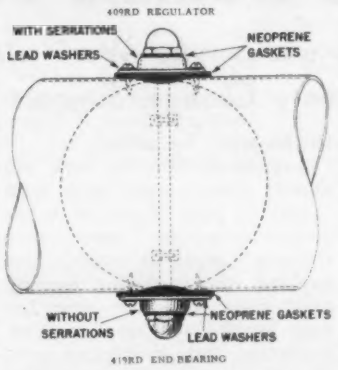
● Development of a new line of porcelainized enamel blower wheels and assemblies that are claimed to exhibit exceptional resistance to corrosion has been announced by Morrison Products, Inc., Dept. AH&RN, 16816 Waterloo Rd., Cleveland 10.

The porcelainized (glass-coated) wheels are designed for process equipment, air conditioning equipment, cooling towers, evaporative condensers, air washers, and other applications where corrosion or abrasion may be present.

Wheels are available in 10 in. through 20 in. sizes, in capacities to 12,000 c.f.m. Corresponding porcelainized housings and bearing brackets can also be supplied, it is pointed out.

Of lightweight construction, the wheels maintain the same run-out and dynamic balance tolerances as standard wheels, according to the company.

Young Announces New Damper Regulator

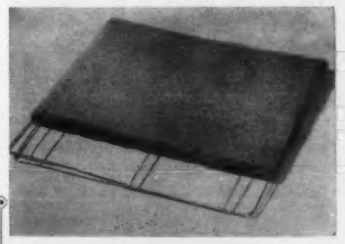


● A new damper regulator, developed especially for ducts carrying high pressures or low vacuums, has been announced by Young Regulator Co., Dept. AH&RN, 20910 Miles Ave., Cleveland 28.

This No. 409RD damper regulator with No. 419RD high pressure end bearing can be installed in round ducts 4 to 8 in. in diameter and is recommended where pressure is over 6 p.s.i.

In this unit a molded neoprene gasket is used at the base. By using lead washers under the metal screws, the unit withstands pressures in excess of 50 p.s.i. without leakage, the company claims. To adjust the damper, the end bearing acorn nut is loosened and the acorn nut on the regulator is removed. After proper adjustment, both acorn nuts are set up tight.

Another damper regulator, model No. 409FD with No. 419FD end bearing, has been developed for installation in rectangular ducts or round ducts over 8 in. in diameter.



Furnace Filter Can Be Machine Washed

● A washable furnace filter made of "ScottFoam" has been introduced by Auto-Flo Corp., Dept. AH&RN, 12085 Dixie, Detroit 39.

The new air filter is based on a type of polyurethane foam, developed by Scott Paper Co., is claimed to offer little resistance to air flow "yet has high efficiency and dust-holding capacity through its 'depth-loading' properties."

The filter, which is non-allergenic and non-toxic, features a double wall of ScottFoam and a zipper opening to remove it from the retaining frame. It may be washed in common household soaps, solvents, or detergents either by hand or machine. The filter is then wrung dry and replaced in the frame. It reportedly does not require oiling or other treatment.

Auto-Flo manufactures filters in four standard sizes: 16 by 20 by 1 in., 16 by 25 by 1 in., 20 by 20 by 1 in., 20 by 25 by 1 in. Prices vary from $4 to $6.

Toledo Adds Line Of Tubing Tools

● Addition of a full line of copper and brass tubing tools to its regular line of hand and power pipe tools has been announced by Toledo Pipe Threading Machine Co., Dept. AH&RN, 1445 Summit, Toledo.

The new "Toledo" tools include cutters, flaring tools, swaging tools, reamers, and benders.

Now available are four cutters for hard or soft copper, brass or aluminum, block tin and lead tubing in sizes from ⅛ to 4⅛ in.

Six flaring tools covering the range of sizes are available. All have hard chrome finished cones and slip-on yoke feature.

A combination flaring and swaging tool, with four swage adapters, complete in metal case, also is offered, along with a regular swaging tool. Seven lever-type tube benders, for sizes from ¼ through ⅞ in., and a set of five spring benders for sizes from ¼ through ⅝ in., are included, as is an inner and outer reamer.

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How the Dealers See It (2)

Favor More Shop and Service Work with Own Facilities, Ask Care In Warranty Change, Suggest 'Group' Promotion

As the air conditioning industry heads into the 1960's after a decade of its greatest, if sometime erratic growth, there seems to be one point about the industry's future—the dealer who sells air conditioning holds the biggest key to its future growth.

How some of the dealers operating in the central residential and conventional commercial markets felt about the industry's future as the 1950's were drawing to a close is reflected in this two-part article. Editorial Director Phil B. Redeker had an opportunity to talk with a number of successful dealers who won Hawaiian trips in a General Electric Air Conditioning Department sales contest. This concluding part reflects viewpoints on service operations, 5-year warranties, and general problems of operating a dealership. First instalment in Jan. 18 issue reported views on how the market should be promoted.

There seems to be an increasing belief among contractors that the more of the job they can do with their own labor and own facilities, the better control they will have over the quality of jobs, and at the same time, increase the profitability in the job.

"We have our own sheet metal shop, but more than that, we try to do as much fabrication in the shop as we possibly can, rather than on the job site," says Carl Clausen of Clausen-Williamson Co., Savannah, Ga. "If we have to do some on-the-job fabrication, we have a special setup for taking a shear, break, and seam maker to the site," he added.

A good sheet metal shop can almost always keep busy with "outside" jobs, if not with the contractor's own work, says Clausen, and if this does nothing else it means keeping good men with the firm the year around. To keep good installation and servicemen with the organization, Clausen thinks maintenance service contracts are a big factor.

"We think it's important to be selective in the kind of maintenance service contracts we take," Clausen says. "We will not take a contract on anything less than a 3-year minimum basis, and we establish the cost of each contract individually, based on the size of the installation, and the age and condition of the job."

Sheet Metal Shop Helps

Another strong advocate of the contractor having his own sheet metal shop with a capacity beyond his bare needs is Ara Yazijian of New England Sheet Metal Works, Fresno, Calif. He points out that the boom in school and other institutional facilities, as well as that in restaurant and roadside stand construction, has created a volume of sheet metal work that is taxing available facilities.

There is one phase of air conditioninig installation work which is largely subcontracted, and it is a phase with which many of the dealers express considerable dissatisfaction.

Electrician Problems

"There's not too many dealers who have enough electrical work to justify having a licensed electrician on their labor force," explained one dealer from a medium sized community, "yet most cities of any size have codes or regulations which make it necessary for a licensed electrician to do the actual connections to the power source.

"It wouldn't be so bad except that very few licensed electricians know anything about the control end of it. So what happens is that one of the dealer's own crew does most of the actual wiring, while the licensed electrician stands around and maybe makes a few final connections and checks it to see if it conforms to the code."

There doesn't seem to be any one good answer to the problem, a discussion among dealers revealed. One obvious solution is to have one man in the dealer's own organization trained to become a licensed electrician, and thus be able to do the electrical work on a part-time basis. Others felt that a change in codes should be sought so that most of the wiring could be done by a man experienced in air conditioning work, but not necessarily a licensed electrician.

A greater emphasis on service will be a key to the continuing existence and growth of most air conditioning dealers, seemed to be the feeling among most of the dealers who touched upon this subject.

Service—or Lose Status

"In a community like ours," says Sig Cox of Sig Cox, Inc., Augusta, Ga., "the dealer must take the responsibility for the continued good operation of the products which he sells or he can't expect to stay in business.

"To do this, he must develop the type of product service that purchasers expect, and have a right to expect. If a change is made in warranty conditions, this will mean that the dealer will be assuming more responsibility than ever for the product."

One of the ways in which Cox has approached the matter of providing the right kind of servicing has been through the build-up of a service maintenance contract business. In a story published in an issue of the NEWS last year, it was told how maintenance contracts are offered to customers in the sizable area which the Cox operations cover. One of the keys to this operation is the use of vehicles especially equipped to handle any kind of a repair or replacement job (with very few

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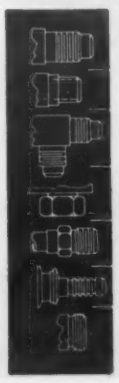

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exceptions) on the spot.

Two members of the G-E Air Conditioning Dept. staff who are primarily concerned with product service on central air conditioning systems, W. F. R. Karsten and H. A. Baumann, say that their experience is demonstrating that more and more dealers are seeing the importance of taking the responsibility for product service, and are making a serious effort to upgrade their service departments.

Attitude is Changing

"We found that out when we put heavy emphasis on service in our 1959 program," Karsten said. "The response we got in our field service schools and to the program generally was beyond our expectation and it showed that the dealer's attiture towards service — which many regarded at one time as a necessary evil — is maturing, with the dealer realizing that a good service setup may be as important as any other part of his business in assuring a good future for it."

"Another thing," adds Baumann, "dealers are beginning to realize that in many instances the serviceman has a much closer contact with the customer than anyone else in their whole setup, and that much of the future of their business will depend on not only how well he does his job, but also on his attitude towards his job, and towards the company for which he works."

Manufacturers have always recognized the importance of service and servicemen, and they have taken steps to give added recognition to their importance. It is reported that G-E is giving consideration to a plan to include servicemen in future prize award trips.

Service Training Ideas

A continuing problem is that of providing adequate training for service personnel, and particularly those who can supervise service department operations.

"More training by manufacturers, by producers of components, and by industry associations is important, but maybe it's more important if the individual dealer will give more thought to service training. If he does no more than set aside some time for the key service people to read up on service literature, trade journals, business techniques, and customer relations, he will be doing a lot towards improving the service job." So say such successful dealers as Sig Cox of Augusta, Ga., Mark Scoratow of Pittsburg, and Jimmy Hatton of Alice, Texas.

Many of the dealers have a variety of objections to extended warranties for a variety of reasons—the main ones being that it is often costly to the dealer, it is confusing to the customer, it creates enormous problems in record keeping, and it often proves a hindrance in developing growth in service business, particularly in maintenance contracts. Most dealers favor modifications in the more complicated forms of extended warranties.

However, to give the complete picture there are a number of dealers who say "go slow" in cutting the warranty too deeply too fast, and some who make an argument for keeping a five-year warranty.

Caution on Warranties

"It's my belief that the manufacturer has an obligation to make good on any product he makes for at least the first year it is installed on a job," declares George Vyverberg of Airco, Inc., Indianapolis. "And if he introduces a new or experimental type of product, I think he has an obligation to make good on it beyond the period of one year.

"The manufacturer has a right to insist on certain installation standards by the installing firm, but in the event of failure in the product itself, within the specified period of warrantied operation, I think it is up to the manufacturer to make a thorough investigation as to the cause of that failure."

Others point out that among the problems of selling air conditioning to homeowners is that of convincing prospects that the equipment will be reliable, and that maintenance costs will not be excessive.

Obligation on Product

"Any run of compressor failures, even in the third year, might ruin the market for air conditioning for years in a particular area, if the customer had to stand the whole cost of replacing the unit," they point out. "There's been a lot of things wrong with the warranty system that's been in effect in recent years, but before we throw it out altogether, let's be sure we have some plan for protecting ourselves and the future of the industry in the event of excessive product failure."

A few dealers would favor the idea of keeping extended warranties until the industry "shakes down" in terms of the number and caliber of manufacturers who remain in the business. Failure to make good on long-term obligations, such as warranties, will influence the buying public in favor of "reliable" manufacturers, they reason.

A major problem in stepping up the volume of central residential air conditioning sales, is the matter of selling the new home buyer or existing homeowner on the concept that air conditioning for the entire home is feasible, available, and not uneconomical, and that it is something that merits preference over a swimming pool, a second automobile, or an outdoor patio.

While national advertising can assist in creating some "desire" for air conditioning, it can't and won't do the big job of motivating the people at the point of purchase, in the opinion of such men as Irving Pittleman, who heads up the distribution effort for G-E central heating and cooling in the Cleveland area; Robert Fry, of Fry Brothers Heating & Air Conditioning Co.; and Frank Ottofy, of Ottofy Strong Co., St. Louis.

'Group' Promotion a Way?

These men are from parts of the country where air conditioning has not been "accepted" as a necessary part of good living standards, as is now occurring in some of the warmer parts of the country. Thus they feel that special educational and promotional methods are necessary at the local level to sell their prospects. But at least one of them, Pittleman, doubts if much can be accomplished by individual effort.

"When you stop and take a look at the type of advertising and promotion that the individual local dealer does," says Pittleman, "you will find that it is primarily product and dealer identification, and this on a rather limited scale. While a certain amount of this is necessary, it has to be recognized that this is not an effort which in itself is going to sell the buying public on the idea of installing air conditioning.

"But suppose all of the dealers in an area got together and took part of their advertising budget and put it into a joint promotion effort—newspaper or TV advertising, or a builder promotion, or maybe even a common central display? Certainly the size of the impact would be much greater."

'Picture' the Job

A dealer who is a firm believer that there will be a continuing good market for commercial air conditioning applications, even in areas of high saturation, is George Hightower of Conditioned Air Sales Co., Atlanta. For one thing, a replacement market is beginning to show up on the older installations, and then the flexibility afforded by present day unitary systems is giving the contractor a chance at jobs which offered little possibility before, and which also afford opportunity in replacement market.

Hightower employs a technique in preparing plans and making installations which is unique, but which makes sense, particularly on existing jobs. He takes photographs of the structure in which key equipment is to be located, or changes in construction are to be made.

"It beats relying on your memory, or even on drawings," he points out.

Austin C. Ross Dies

BUFFALO—Austin C. Ross, a former vice president of Worthington Corp., died here Jan. 8 after a long illness.

After three years as assistant general purchasing agent, Ross became assistant general manager of the Worthington compressor and engine division here in 1935. In 1940 he was appointed the division's general manager and its vice president in 1950, continuing in both posts until his retirement in 1958.

it's MARLEY for

World's Most Advanced Line of

WATER COOLING TOWERS

and

AIR COOLED REFRIGERANT CONDENSERS

Again in 1960, "it's Marley" —for more and better packaged products to handle the cooling requirements for air conditioning, refrigeration, and limited capacity industrial demands. In Marley's complete '60 line (shown on the following pages), you'll find mechanical and natural draft cooling towers and air cooled refrigerant condensers . . . in a wide variety of sizes and styles . . . of structural materials designed for "routine" or ultra-corrosive atmospheres . . . for service indoors or out.

Your nearby Marley distributor makes this "complete coverage" line available on a whenever-and-wherever-needed basis. Also "on your team" is the Marley Company, with its meaningful guarantee of 36-years standing that "every Marley product will be satisfactory to every purchaser."

See the MARLEY '60 LINE displayed on the following pages and in BOOTH 814 at the DALLAS EXPOSITION of the ASHRAE—Feb. 1-4

OVER THE COUNTER OR THRU THE MAIL

There are six well-stocked Harry Alter warehouses located for your convenient pick up. Mail orders are shipped the same day as received, to *anywhere* in the world. Phone or write us and you'll usually have it the next day. We are nearby to nearly everyone, with everything they need.

We're Real Specialists in

REFRIGERATION • AIR CONDITIONING • ELECTRIC MOTORS

SUPPLIES and PARTS

SAVE MONEY, time and effort by ordering from our new *Dependabook,* the most complete catalog of all. 232 pages. Over 10,000 items carried in stock. *Wholesale only.* Your orders filled really fast by mail, or they can be picked up at one of our six big warehouses.

Write on your letterhead for the 1959 DEPENDABOOK...
Also our monthly Flyer of surplus and close-out Bargains.

THE HARRY ALTER CO., INC.

1717 S. Wabash Av. Chicago 16, Ill.	134 Lafayette St. New York 13, N.Y.	2332 Irving Blvd. Dallas 7, Texas	695 Stewart Ave., S.W. Atlanta 10, Ga.

FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

What's Going On in Commercial Refrigeration

News of Markets, Products, Methods

Cooling, Refrigeration Distributors Report Sales Up 28% In November

WASHINGTON, D. C. — November sales of air conditioning and commercial refrigeration equipment distributors were up 28% compared with the same month of 1958, according to the monthly wholesale trade report of the Census Bureau.

The bureau said this was the sharpest increase over year-ago sales of any of the trades covered in the report.

Compared with October, the air conditioning and refrigeration distributors' sales in November were off 4%. However, their sales for the first 11 months of 1959 rose 11% from the corresponding period of 1958.

Their end-of-November inventories were up 15% from a year earlier and 5% higher than a month earlier.

November sales of plumbing and heating equipment and supplies distributors rose 8% over the November, 1958, level but declined 12% compared with October, 1959. But their first-11-month sales were 14% ahead of the same period of 1958.

Lofstrom Heads Refrigeration Sales For Brewer-Titchener

NEW MILFORD, Pa. — John R. Lofstrom has been named sales manager of the Refrigeration Div. of The Brewer-Titchener Corp. here, it was announced by Frederic A. Celler, vice president for sales of The Brewer-Titchener Corp.

Lofstrom was formerly manager of the Commercial Development Dept. of The Richardson Co., Melrose Park, Ill., manufacturer of the "Permashell" plastic molded soft drink delivery case.

Five Major Dairies Sued Again for Furnishing Equipment To Accounts

SAN FRANCISCO — In a $2,355,000 suit, five major dairies and a subsidiary have been accused of violating the Sherman and Clayton Anti-Trust Acts.

Eleven independent dairies initiated the suit in Federal Court here, charging, among other things, that the defendants had furnished equipment to retailers and financed construction or refurbishing, in return for exclusive handling or preferential treatment of their products.

Plaintiffs asked for treble damages, although actual damages were set at $785,000, and also requested a court order halting the majors from entering into any agreements or contracts they complain of.

DEFENDANTS

Defendants are the Borden Co., New York City; Foremost Dairies, Inc., Jacksonville, Fla.; Beatrice Foods Co., Chicago; Carnation Co., Los Angeles; Arden Farms, Inc., Los Angeles, and its wholly-owned subsidiary, Equipment Enterprises, Inc., Los Angeles, which is used by Arden in the purchase and sale or lease of equipment.

PLAINTIFFS

Plaintiffs are Red Top Dairy Products, Inc.; Mountain View Dairies, Inc.; Anderson Dairy; Grocers Milk Co.; Manfull Dairy Farms; McColl's Dairy Products Co.; Happyholme Dairy Products; Sanitary Dairy; Sunny Maid Farms; Sunshine Farms; and Sun Valley Dairy.

Plaintiffs charge defendants with "unlawfully conspiring" since before 1952 to curtail the business of the independents through "unlawful agreements" which "lessen competition and tend to create a monopoly in the interstate trade of milk, dairy, and milk products."

The defendants were also accused of leasing, selling, or contracting, either alone or in collaboration with each other, for equipment used by retail customers with the understanding that retailers would not handle independent products or that they would give defendants' products preferential treatment.

Further, it was charged, they "gave discounts or loaned money to retail customers" for obtaining equipment in return for exclusive handling of their products, and they "financed the construction of new stores, restaurants, hotels, and markets and financed the sale and transfer of existing stores, etc.,"—all for exclusive handling of their products.

As a result, independent dairy products are practically excluded from retail outlets, the complaint charges.

Chicago DISA Meeting To Plan Fall Show

WASHINGTON, D. C. — The 41st annual meeting of Dairy Industries Supply Association will be held March 31-April 1 at the Edgewater Beach hotel in Chicago.

Major business before the gathering will be plans for the staging of the 22nd Dairy Industries Exposition, scheduled for Chicago's International Amphitheatre Oct. 31-Nov. 5.

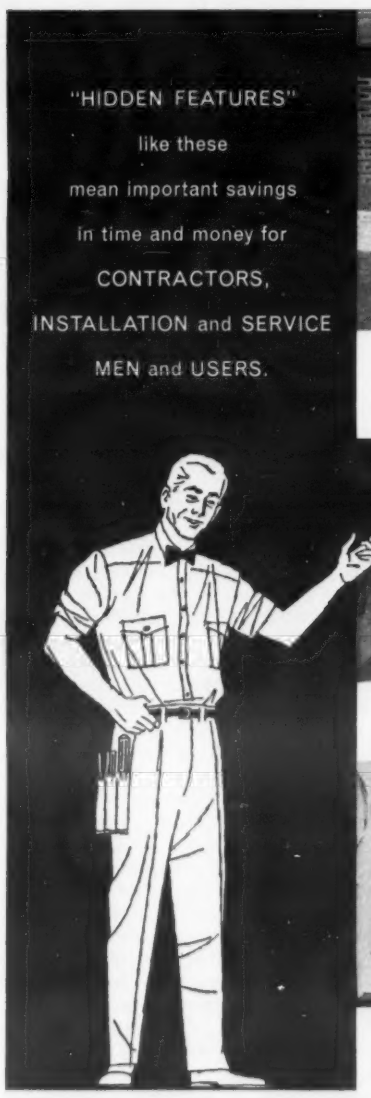
A unique industrial lottery will decide the display locations of nearly 400 member companies, it was indicated.

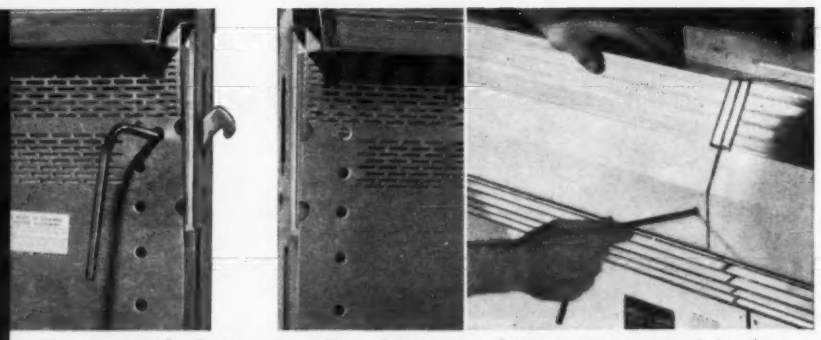
One of a series

TYLER PRE-PLANNING

helps speed installation and service

"HIDDEN FEATURES" like these mean important savings in time and money for CONTRACTORS, INSTALLATION and SERVICE MEN and USERS.





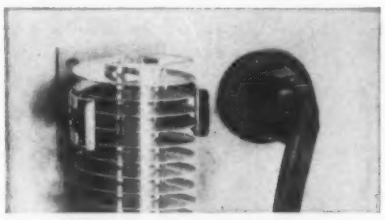
Tyler-pioneered Oscillock speeds installation. Cases can be completely assembled in lineup and against wall, with all connections easy to reach.

Oscillock pulls cases snugly together, easily set with Allen wrench (furnished) —saves time, cuts labor costs.

Trays in bottom of Tyler Sales-Cases are readily removed, without screws, clips or fasteners . . .

Just a twist of the dial and presto!—panel opens for easy access where required.

. . . for easy access to blower fans and other factory-installed refrigeration component sub-assemblies.



Snap-in defroster, plug-in electrical outlets are typical of the many time-saving efficiencies pre-planned by Tyler.

Tyler opens up new profit opportunities to aggressive, well-rated commercial refrigeration organizations. Write today for details.

Copyright 1959, Tyler Refrigeration Corporation

Tyler Refrigeration Corporation, Dept AR-1, Niles, Michigan.
Send details on ☐ Tyler Distributor Franchise Program ☐ Sales-Cases ☐ Air-Skreen Sales & Storage Coolers ☐ Condensing Unit Assemblies ☐ Shelving ☐ Checkouts ☐ Reach-Ins ☐ Storage Freezers ☐ Walk-In Coolers ☐ Rolling-Cold Packaging Conveyors.

NAME_____

ADDRESS_____

TYLER REFRIGERATION CORPORATION, Niles, Mich.

TYLER gives you more! TYLER

Canada: Tyler Refrigerators, 732 Spadina Ave., Toronto, Ontario. (Export: Tyler Refrigeration International, C. A., Apartado Postal 9262, Caracas, Venezuela, S. America)

'Sell Through Him Not To Him'

Cawthon Advises Manufacturers To Make Distributor a 'Member of Your Team'

ATLANTIC CITY, N. J.—Develop an attitude of selling *through* the distributor rather than *to* the distributor. Make him in reality a member of your team, Dudley M. Cawthon, a distributor, advised commercial refrigeration equipment manufacturers.

Speaking at the 13th annual convention of the National Commercial Refrigerator Sales Association, Cawthon pointed out several areas where manufacturers could offer more assistance to their distributors to their mutual benefit.

These include the areas of advertising, business operations, service, and sales policy.

"I believe the most important asset the manufacturer has is being overlooked," the NCRSA first vice president declared. "I don't believe there is any manufacturer in our industry who is using to the fullest the facilities, the services, the know-how which the distributor places at his disposal."

The Miami distributor urged manufacturers to develop a method of distribution that uses to the fullest extent the facilities of their distributor organization.

Here are some of Cawthon's specific suggestions of what manufacturers could do to promote more sales through distributors:

Advertising

Why not take a vigorously aggressive and progressive approach to the spending of your advertising dollar?

The theme of the Ed Sullivan show is to get as many people as possible to go into the Lincoln - Mercury showrooms and see the new Mercury and Lincoln.

So it is with dozens of programs on television and radio. May I suggest that you shout from the rooftops, "Buy from your distributor" — "See your distributor today." By shouting from the rooftops, I mean point of sale merchandising.

The point of sale in your advertising is the ad itself. Tell the food merchant about the services your distributor can furnish him. Tell him to see the equipment in the distributor's showroom.

Business Operations

Assist your distributor in the over-all program of running his business. Assist him in setting up an adequate record system.

Supply a procedure for establishing budgets, costing systems, accounting systems, as simple as possible, but adequate enough to supply the information necessary for the distributor to know where he is going and whether or not he is making a profit.

Assist him in the management of his business. Assist him in sales management. Assist him in service management.

Take the strong points from the best distributors and compile them into a system that can be recommended to other distributors.

Factory Service

Organize a factory service department for the purpose of serving the distributor and the customer promptly and with a smile.

The greatest single complaint by distributors is the way service complaints and problems are handled by the manufacturers.

Have you ever heard anyone make the statement, "I don't know why you are having trouble with that particular piece of equipment. We aren't having trouble anywhere else."

Customers are lost by excuses. Adequate service wins customers.

When a promise is made, see that it is kept. If it is utterly impossible to keep it, be sure the customer is advised of the delay and when service can be rendered.

Distributor Service

The manufacturer can upgrade his distributors by presenting to them a service program with checks and balances to be sure that the customer receives the kind of service to which he is entitled and that the distributor gets paid for it. The service department of every distributor must have prime consideration if he is to continue in business.

Selling Policy

Since virtually all equipment used in food stores is becoming more mechanized and needs more and more service, a pricing formula must be used with sales, both to corporate and voluntary and co-op groups alike, at prices which permit the growth and prosperity of the distributor organization.

The distributor purchases equipment for inventory, carries a parts inventory, has a service organization with supervision, maintains trucks and service vehicles, and has many specialized tools and other equipment to service efficiently and adequately the user.

Is it good business for the manufacturer to ask the distributor to pay the same price as a direct buyer for equipment while maintaining an organization and facilities such as this?

As the independent, voluntary, and co-op groups develop, they find out what the discount schedules are because of the interchange of personnel coming from the corporate chains who buy direct at the maximum discount.

This in turn is passed on to the independent. Consequently, wherein can your distributors find a solid foundation and basis for a profitable operation?

In reality, why isn't the co-op with 200 members as much entitled to the maximum discount as the corporate chain with 50 or 100 stores? Then who is left to be sold by the distributor?

The corporate chain with 50 or 100 stores will only buy equipment for one store at a time. The co-op does likewise. Neither buys for distribution from a central point.

Only a few manufacturers saw this problem early enough to adopt a realistic policy in the matter of selling equipment to the chain and insisted that the selling price be big enough to help maintain and sustain the dealer and service organization.

This problem is great. It is closing in on your distributor organization. The distributor has one avenue left, and this is to change his operation to strictly a service operation and sell a piece of equipment now and then to his service customers.

The manufacturers should take a real hard look at this problem. I believe you will find that this is the time for a hard look at your distribution system.

If I could leave but one thought with you, it would be this.

Develop a method of distribution which will use to the fullest extent the facilities of your distributor organization. I believe it would make more money for you with fewer problems and fewer headaches. It would also be profitable for the distributor and would attract better distributors.

You can by-pass the distributor, but you cannot by-pass the services he renders. When the distributor is by-passed, it only costs you money.

Tyler Net Sales Hit New High

NILES, Mich.—Tyler Refrigeration Corp. has reported a new high in net sales of $20,381,295 for the fiscal year ended Oct. 31, 1959, as compared to the previous year's net sales of $16,753,972.

Net earnings of $915,498 for 1959 represent $2.04 a common share on the 448,000 shares presently outstanding, according to Robert L. Tyler, president. Net earnings of $772,156 in 1958 accounted for $1.72 per common share. Dividends of 90 cents per share were paid in 1959.

Large scale improvements and expansion of Tyler plants at Niles; Waxahachie, Texas; Smyrna, Del.; and Schwelm, Westfalen, West Germany, made the company's over-all capital investment in 1959 the highest in its history, the report said.

Teamwork Makes More Money For COLDIN DEALERS

No other manufacturer of commercial refrigeration can offer the important advantages that come with a Coldin Franchise. You have the greatest line to choose from . . . world's finest quality plus close, personal cooperation. Earns dollars, makes sense too! Inquire!

Coldin NEW YORK

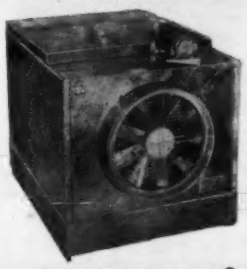
Your Key To Better Refrigeration

COLDIN

CABINET CO., Inc.

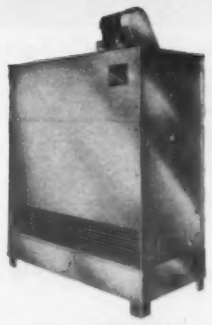
2800 webster avenue, new york 58, n. y. • cypress 5-3311

it's MARLEY for



AQUATOWERS®

World's best-known steel mechanical draft cooling towers. Heavy-duty mechanical equipment, close-packed filling cube, exclusive diffusion deck and hot dip galvanized finish result in unequalled performance, economy and durability. 14 models from 3 tons up; dual units extend capacities to 120 tons nominal.



AQUACOOLERS®

Indoors or out, in minimum plan area, AquaCoolers can be easily and economically installed. Performance is full-capacity; operation is whisper-quiet and leakproof. Heavy gauge steel casings and basins, as well as centrifugal blowers and scrolls, are hot dip galvanized for extra service life. 10 models available, 5 to 90 tons, nominal.

OTHER MARLEY PRODUCTS:

SPRATOWERS® . . . for natural draft cooling

WOOD AQUATOWERS® and PERMATOWERS® . . . for longest life in corrosive atmospheres

DRICOOLERS® . . . air cooled refrigerant condensers

Installation & Service Practices In Commercial Refrigeration

One of a group of discussions on several phases of the installation, operation, and servicing of commercial refrigeration equipment.

By Frank J. Versagi

Installation/Maintenance Responsibility (1)

A major food chain in Canada is contracting with a large commercial refrigeration manufacturer in this country in such a way as to hold the manufacturer ultimately and legally responsible for the entire refrigeration installation and subsequent in-warranty maintenance and service. At least one manufacturer is experimenting with this same idea with a chain in the South.

The chief producers of commercial refrigerated display cases have developed forms and techniques which aid the customer in laying out his store, some going so far as to specify the number and type of copper fittings, exact location of drains, electrical connections, and all the factors which directly or indirectly affect the installation.

These developments because *the greatest single cause of service problems in commercial installations is incorrect or incomplete procedure in some phase of the installation.* On this, all manufacturers and most store officials agree.

And food chains are tiring of the divided responsibility which exists when a distributor, dealer, or independent contractor of the chain's own choosing installs the equipment. "It has become only too obvious that the experienced installer tends to ignore some instructions and specifications which the manufacturer considers mandatory for satisfactory performance of its equipment," complains one chain executive.

As a matter of policy, the major food chains are very reluctant to make statements for publication, but this complaint concerning poor installation was repeated by every operator and construction department contacted by the NEWS.

Here is what happens.

The chain normally arranges for installation of the commercial equipment, and it may or may not use an authorized distributor of the equipment being installed, since in most cases the chains purchase directly from the manufacturer. Frequently, bids are made by two or three installing contractors, and the lowest bid is usually accepted.

To get the job the contractor may—with the best of intentions and based on his past experience—alter certain items in the manufacturer's recommended installation procedure and bill of materials. It is not unusual, for example, for contractors to cut down on the size of copper tube recommended, in this way making a noticeable reduction in the bid.

Or, drainage recommendations may be ignored or altered. Or, the time needed for a complete and thorough evacuation and charging procedure may be reduced or omitted.

The NEWS has been told repeatedly by supermarket operator and manufacturer that the carefully prepared instructions supplied by the manufacturer are perused superficially, sometimes not at all. "I was called out during the installation where the contractor was having difficulty arranging the drains for a line of cases," recalls one manufacturer's service manager. "Not one of the envelopes containing our installation instructions had been opened; most had been thrown on the floor, while a few were still taped to the case," he complained.

(To Be Continued)

Tyler Questions Figures on Efficiency Drop

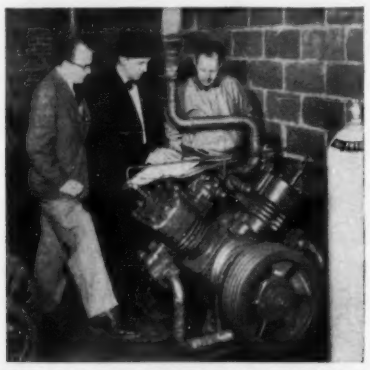
Dear Frank:

We cannot agree with the manufacturer you quoted as saying that one pound of pressure drop in an R-12 system will cause a 20% loss of efficiency. This cannot be so.

Take a typical 1-hp. machine at a 10° suction. That machine will move 6,900 B.t.u. at a 90° ambient. The same machine by the manufacturer's rating at 5° suction will move 6,200 B.t.u. at 90° ambient. This means that each one-degree drop in suction will result in approximately 140 B.t.u. loss of machine capacity. 140 B.t.u. would hardly seem to be 20% of the original 6,900.

Your articles on installation and service practices have been very good. We have watched them with pleasure and have read each line carefully. We are sure they are beneficial to the industry.

ART PEREZ
Chief Administrative Engineer
Tyler Refrigeration Corp.

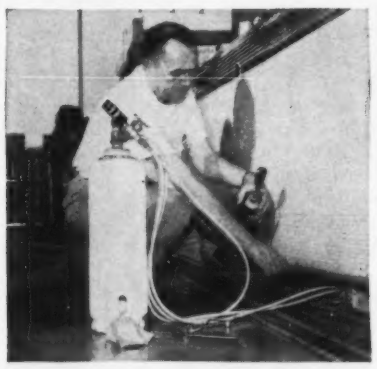


Baltimore, Maryland, service engineer reports: "'Freon' refrigerants help us do a better servicing job. It's dry and safe—the most dependable refrigerant on the market today."

East Rockaway, New York, contractor reports: "Nothing works like 'Freon'. I'm convinced it's the best refrigerant on the market—safe and dependable for any job."

Louisville, Kentucky, service man reports: "'Freon' is the world's best refrigerant for our money. It's pure, dry and safe—never causes one bit of worry or trouble."

Atlanta, Georgia, contractor reports: "We've never had a bad batch of 'Freon' in the 25 years we've used it. It's never caused us trouble on the job or—after years of service—in a system."



Tucson, Arizona, service man reports: "'Freon' refrigerants help us do the best job possible. They're reliable and safe. Since 'Freon' came out, we've never used anything else."

St. Louis, Missouri, service man reports: "We've never had a moisture or corrosion problem in equipment charged with 'Freon.' It's absolutely dependable—always pure and dry."

All over the country, users are talking about the advantages of Freon* refrigerants

East, west, north or south—contractors and service men appreciate the extra quality of "Freon" refrigerants that costs them nothing extra.

"Freon" is today's premium-quality refrigerant . . . stable, pure, dry—nonflammable, nonexplosive, nontoxic. It's time-tested—in use over 27 years and made only by Du Pont—backed by years of technical and manufacturing leadership.

Specify "Freon" refrigerants for every refrigerant need. Your Du Pont wholesaler has it—now capped in gold and factory-sealed to guard its purity till you're ready to use it.

DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

FREON® *premium quality* REFRIGERANTS

**Freon and combinations of Freon- or F- with numerals are Du Pont's registered trademarks for its fluorinated hydrocarbon refrigerants.*

Your Customers' Best Buy. . .
(and yours, too!)
IDEAL
Speed-Freeze
PRODUCTS

BEVERAGE COOLERS
unexcelled storage capacity with Ice Cube Makers

OUTSTANDING SECTIONAL METAL WALK-IN COOLERS

IDEAL
COOLER CORPORATION
2830 MAGAZINE ST.
ST. LOUIS 6, MO.

At Heart of the Prime Rib Restaurant

Proper Temperature, Humidity, Air Circulation Key to Maintaining Flavor, Color of Meat

CHICAGO — "Proper aging and refrigeration can do as much for the taste of a steak or prime rib as proper cutting and cooking.

"Constant temperature in our cold rooms is a must to preserve the taste qualities brought about by aging. Too much variation to either the warm or cold side can ruin a cut of meat. And there's no quicker way to lose customers."

So stated George Diamond in commenting on the importance of the refrigeration systems at each of his five restaurants, which specialize in aged steaks, and prime ribs.

BOTH COOLERS in aging room are fitted with drain line so that moisture goes to outside of room. Pipe on rear wall comes from cooler at right, joins with pipe from cooler at left. Low ceiling dictated specifying low silhouette cooler.

Diamond Enterprises, Inc. owns and operates the chain. Two of the restaurants are in Chicago, and one each are in Milwaukee; Whiting, Ind.; and Antioch, Ill. A hotel in Palm Springs, Calif. was recently added to the list of establishments.

Most recent addition is the Heart of the Prime Rib, a restaurant located just south of Chicago's Loop. Opened in July, 1959, it has already established itself as a paying member of the family.

Regarding the refrigeration system at the Heart of the Prime Rib, Diamond said:

"Our requirements were not complex or extravagant, but they were strict.

"Basically, we wanted a system that would maintain temperature and humidity in the cold rooms, especially the aging room with a minimum variation. Too much variation of either would affect the flavor and color of the meat.

"For the same reason, we wanted a system with the right kind of air distribution—that is, one that would prevent cold air from blowing directly on the meat. Lastly, the system had to use as little space as possible."

To design and install a system to meet these requirements, Diamond called in RMC Inc., formerly known as Refrigeration Maintenance Corp., of Chicago. According to Bill Brady, designer of the system, "the key to meeting the requirements listed seemed to be in proper selection of equipment.

Series of Unit Coolers Used Rather Than Gravity Coil System

"One of the first decisions that we made was to use a series of unit coolers rather than a gravity coil system. This solved two of the problems—space and air distribution. By using blower units, we were able to select a type that directed the air upward and deflected it off the ceiling."

The type of unit cooler selected for the job had to be capable of maintaining 36° F., ± 2°, and 88% r.h. in the cold rooms. In addition, the low ceiling, especially in aging room, required for a low silhouette model.

Five ceiling-mounted "Krack" coolers, made by Refrigeration Appliances, Inc., Chicago, were selected. Two model F17OST coolers are in the aging room, an F75OST in the overnight or short term storage room, an F130OST in the meat cutting and preparation room, and another F130OST in the vegetable storage room.

Serving the two units in the aging room is a Carrier 3-hp. compressor. Serving the remaining coolers are Bendix-Westinghouse 1-hp. and 2-hp. compressors. Refrigerant-12 is used in the aging room system, and Refrigerant-22 in the remaining systems.

These coolers are constructed with fins on each end, with the blower fan mounted in the center of the unit. The fan is designed to draw warm air from the outside of the unit in through the coils, then blow the chilled air upward against the ceiling where it is deflected in all directions. Thus, the possibility of cold air being directed against the stored meat or produce is eliminated.

Thermostat Operation

Temperature control is maintained by a thermostat installed in the room itself, plus a low pressure control. Primary control is exerted by the thermostat, which turns off the compressor when room temperature drops to 35° F. and turns it on when room temperature climbs to 37° F. At these temperatures, of course, no frost forms on the unit cooler coils, it was noted.

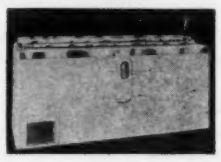
If the thermostat is accidentally turned low enough to form frost on the coils, or if by some system malfunction the temperature drops into the region where frost forms, the low pressure control will automatically shut off the compressor to prevent frost buildup. When this happens, the frost that has formed will melt as room temperature rises.

In any event, water from melting frost or condensed moisture that forms during normal operation of the system collects in a drain pan which is an integral part of the cooler and into a drain pipe.

The pipe leads to the outside of the cold room and dumps into the building's plumbing system. This satisfies another of the owner's requirements—that no moisture be allowed to collect in the cold room.

Strict humidity control is a result of the inherent design of the coolers themselves. The coil fins in the particular Krack units used in the job are spaced in such a manner that air passing through them does not give up too much of its moisture content. Thus, by controlling the flow of air going through the coils, the humidity is alo maintained at the required 85% r.h.

BEVERAGE COOLERS



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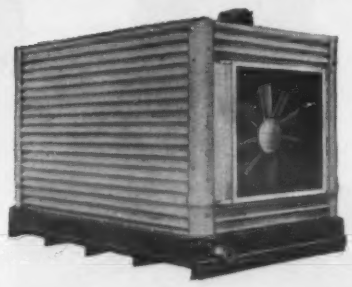

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Would Level Off Home Heating Bills

Degree Days, Not Quantity, Would Determine Gas Rates Under Proposal

PHOENIX — Residential gas rates based on daily temperature, or degree days, rather than on quantities of gas used, was the formula recently proposed by the Arizona Public Service Co. here.

The formula depends on the fact that in cold weather unit costs of gas actually go down and in warm periods they go up.

Under the proposed formula, it was explained to the Arizona Corporation Commission, the consumer's winter bills would be quite a bit lower than he now pays, while bills for the other periods of the year would go up. The annual expense would about equal present consumer expense.

Advantages of the new system are a more stable flowing of cash throughout the year to the utility and an elimination of heavy seasonal drains on the family budget.

Arbiter for the degree days would be official readings of the nearest U. S. Weather Bureau stations. The rates would change automatically with temperature change.

Arizona Public Service Co. considers its new plan but one in a series of expansion activities, which have included the installment of a computer that works on all phases of operations and will include a special automatic meter reader now being tested by the company.

Boiler Sales Up

CHICAGO—Sales of cast iron boilers during the first nine months of 1959 showed a gain of 10.4% over the corresponding period of 1958.

During the 1959 period, 157,901 boilers were shipped by manufacturers as compared with 143,029 during the same period in 1958, says the Plumbing-Heating-Cooling Information Bureau.

Wallace Names Kohles

BELMONT, Calif. — Frank Kohles, general sales manager of William Wallace Co., has been elected vice president in charge of sales, according to Alan Kinkead, president.

Kohles will be responsible for "Metalbestos" gas vent pipe and all fuel chimney products as well as William Wallace's line of sheet metal building products.

'Electric Heat Competition' To Be Topic At OHI Convention In N. Y. April 6, 7

NEW YORK CITY—Two special sessions at the coming 38th annual convention of the Oil Heat Institute of America have been planned for plumbing and heating and warm air heating contractors on the subject "Electric Heat Competition."

This was announced by Everett Elliott, chairman of the Diamond Jubilee—38th Annual OHI Convention Committee.

The sessions will be held Wednesday and Thursday afternoons, April 6 and 7, from 3 to 5:30 p.m., on the mezzanine of the New York City Coliseum.

These sessions are in addition to the OHI Distribution Div. dealer - distributor - jobber business building rallies which will be held on Wednesday and Thursday mornings, April 6 and 7, and the commercial-industrial sessions which will be held each morning, Monday through Thursday, April 4-7, at the Park Sheraton hotel.

The Wednesday afternoon 2 to 5:30 p.m. "Electric Heat Competition" session will be for plumbing and heating contractors (wet heating - hydronics). It will be devoted entirely to combating possible inroads of electric heating, the announcement said. The chairman of this session will be Shep Doherty, vice president, A. W. Cash Valve Mfg. Co., and president of the Better Heating-Cooling Council.

The second session, for warm air heating contractors, and held on Thursday afternoon, will also be devoted to methods, means, and procedures of successfully competing with electric heating. The chairman of this session will be John Olson, vice president, The Nu-Way Corp.

Panels at the electric heat sessions will cover five general fields:

1. The contractor's viewpoint of electric heat competition.
2. Electric heating in the commercial-industrial field.
3. The market analyst views the electric heating market.
4. Technical problems facing electric heating.
5. Competition from the heat pump.

According to Elliott, electric heat will be, in time, as serious a competitor of oil heating as gas heating, and the Oil Heat Institute of America will provide considerable assistance in the near future in the form of information for dealers, distributors, and jobbers, both of heating oil and equipment, as to methods and means of competing successfully with this type of heating.

Electric Heat To Be Topic at Midwest Electrical Meeting

MINNEAPOLIS — Two sessions dealing with electric home heating are scheduled for the 23rd upper midwest electrical industry convention and 10th biennial electrical trade exposition in Minneapolis.

The convention-exposition will be held Feb. 14-17 at the Leamington hotel. It is anticipated that the three days of programs, covering a wide range of subjects plus the largest electrical trade exposition (163 booths) ever staged in the upper midwest, will build a record-breaking attendance, according to the North Central Electrical League.

In a recent bulletin, the league also noted that more than 16,000 lines of advertising promoting electric home heating and the services of qualified electrical contractors were appearing in the Twin Cities dailies under the sponsorship of the National Electrical Contractor Associations in St. Paul and Minneapolis.

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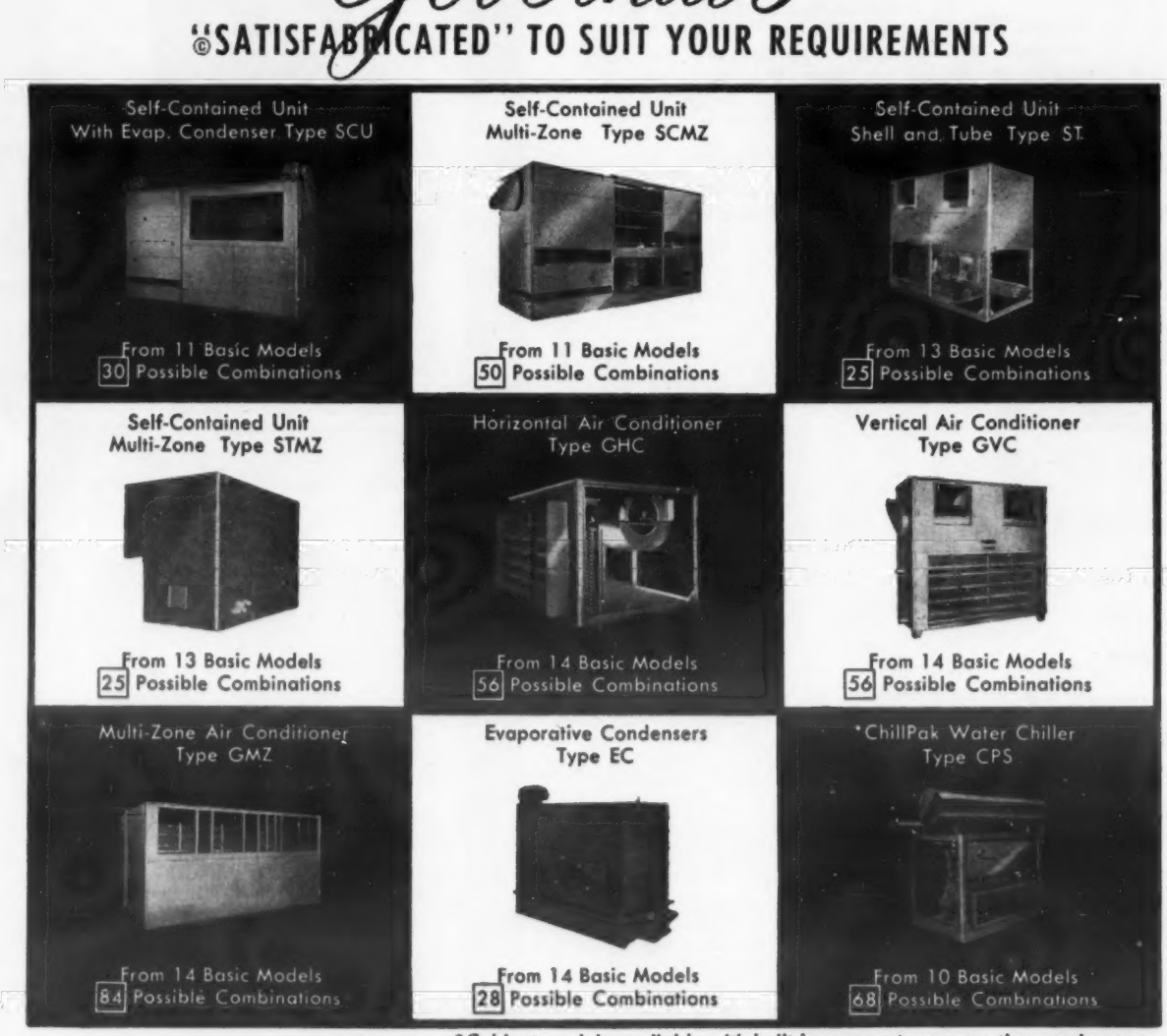

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Savings of 75% In First Cost Claimed for Pneumatic Control System Said To Be Simple, Yet Versatile

WALDEN, N. Y.—Savings of as much as 75% or more in the first cost of a control system installation are claimed to be possible with a simple but versatile air-loaded regulating valve, according to Spence Engineering Co., Inc., here.

Such a control system can be used in many heating, food processing, refrigerating, and other applications, says Spence.

For example, to control drying air temperature a pneumatic thermostatic instrument plus a pneumatic control valve are frequently used in food processing and other applications. More often than not a pressure regulator is also installed to reduce steam pressure to the control valve. Here two valves are used to do the work of one.

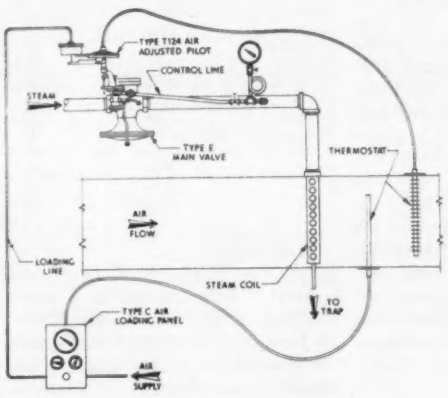

FIG. 1—Central control of drying air process temperature is furnished by air-adjusted pilot, regulator, and remote air-loading panel engineered and manufactured by Spence Engineering Co., Inc.

Eliminating Separate Reducing Valve

Connecting an air-loaded temperature regulator as shown in Fig. 1 would eliminate the separate reducing valve, it is claimed.

This cost-cutting hook-up employs a Spence air-loaded pilot and remote control panel. For best control this regulator can be located at the drying coils.

The panel permits adjusting the regulator from a central control station. A dial thermometer with separate thermometer bulb, capillary, and fill in the panel will show up a failure in the regulator's thermostat. Where simple proportional control is satisfactory the air-loaded regulator can replace higher modes of control at less cost.

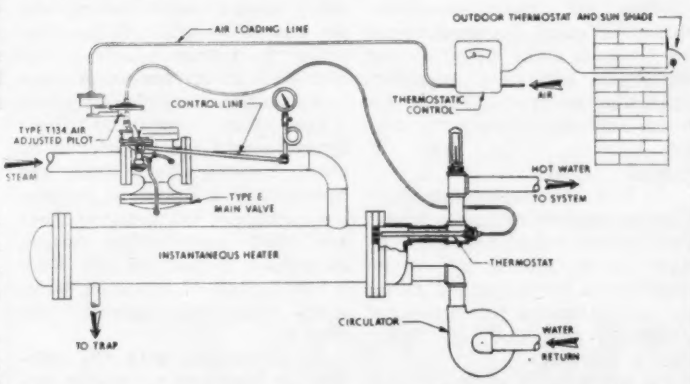

FIG. 2—To match heating converter output to load, air-loaded temperature regulator is used that eliminates separate pressure reducing valve, mixing valves, and control instruments.

Savings on Hot-Water Heating System

To slim down expenses on a hot-water heating system, this air-loaded temperature regulating method can be used in the simplified control hook-up shown in Fig. 2. The usual much-instrumented control system calls for a 3-way mixing valve as well as a temperature regulator to hold the heater outlet temperature at a set figure.

The thermostat control for the mixing valve needs two thermostat bulbs (one outdoors, one for system water) to blend return water from the pump with hot water from the heater. The mixing provides an intermediate temperature for the process.

The same job is accomplished with an air-loaded temperature regulator and outdoor control—eliminating both mixing valve and control instrument. When outdoor temperature falls below 65° F., the thermostat control delivers a 3 to 15 p.s.i. air signal to the Spence air-adjusted pilot. Steam shut-off adjusted at 3 p.s.i. is automatic during summer. Higher air signals permit the regulator to deliver required water temperature to heating system.

The same arrangement can eliminate extra valves, fittings, and controls that are now widely used in steam radiation systems. In this hook-up a Spence air-adjusted pilot and thermostatic instrument controlled by outdoor temperature simply vary steam pressure in the radiators to achieve control.

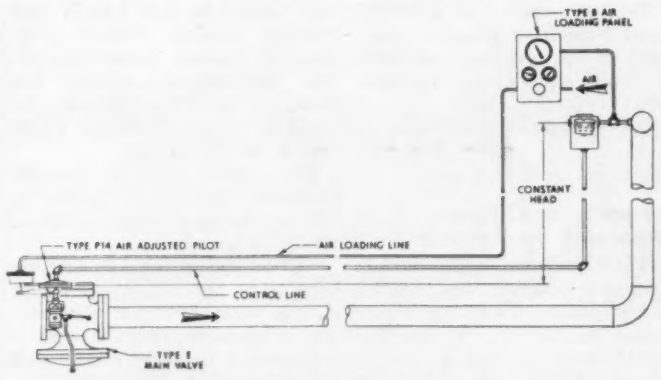

FIG. 3—Remote control of pressure regulator has essentially no limitation on distance from control point and control station.

FIG. 4—Compact remote control panel for air-adjusted regulator includes gauges for delivery pressure, supply, air and adjusting air pressures. Panel and air-adjusted pilot permit control at a distance from pilot without affecting regulator's performance, it is claimed.

There are many instances where it is necessary to control a condition at a point that is remote from the regulating valve. By using a simple and relatively inexpensive air-loaded regulator, the pressure regulating main valve can be adjusted from a control station that is distant from the valve as well as the control point, Spence claims. This provides flexibility in designing process equipment for minimum first cost.

The hook-up shown in Fig. 3 has essentially no limitation on distance between regulator and control point as long as the control line is solidly water filled. The set point of the regulator is established by the air signal emitted by the Spence air loading panel in Fig. 4.

The same hook-up could be used for remote adjustment of an air-pilot regulator acting as a pump governor. Main valve and pilot would be located at the pump to keep the pilot's control line to pump discharge as short as possible. The air loading panel, however, could be located at any remote, centrally located station.

Used as an altitude valve to control height of water in a standpipe or tank, the air-adjusted pilot also makes it possible to continuously adjust a water level from a remote station when it is necessary.

The air-adjusted pilot illustrated in these hook-ups is mounted at the valve for greater control stability. The remote control panel mounts above or below the main valve and at any distance from the pilot without affecting the regulator's performance, it is said.

'Will Handle 20 In. of Pressure'

Chase Manhattan Bank Using 12 Miles Of Galvanized Steel Spiral Ductwork

NEW YORK CITY—Twelve miles of galvanized steel spiral ductwork "which will handle as much as 20 in. of pressure, as compared with 1 in. for conventional ductwork," is being installed in the new 60-story Chase Manhattan Bank Bldg. here, according to Carrier Corp.

William A. Bingham, Jr., who is supervising the installation of Carrier equipment, says that the galvanized ductwork, which is fabricated under the trade name of "Spira-Pipe" by Carrier, will be installed in the high velocity perimeter air conditioning system, and will normally operate under 10 in. of pressure.

He said that the capacity to withstand the much higher pressure of 20 in. not only provides a safety factor, but also results in greatly reducing any maintenance problems involved in a high pressure system.

Conventional ductwork of economical, corrosion resistant galvanized steel sheets will be used in the interior system.

In all, the 9,100-ton Carrier "Weathermaster" air conditioning system will need over 1,000 tons of galvanized steel sheets.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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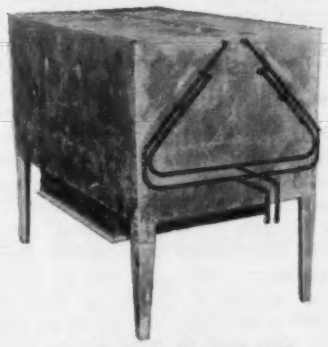

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'Forced Humidifiers' (2)

Consumer Interest In Humidity Control In Winter Means Growing Market for Dealers

This is the second of a series of articles dealing with "forced humidifiers"—a relatively new product offering interesting sales possibilities for the residential heating and air conditioning contractor. Broad aspects of the subject are being discussed in the series, including the market, sales approaches, application, and service plus specific information about 14 different makes.

The material was gathered in personal, phone, and mail interviews with many individuals, including manufacturers, dealers, and others.

How much of a market is there for these new forced humidifiers?

Theoretically, no home should be without one, of course, but in actual practice things seldom work out that way. Annual sales of plate-type humidifiers have been ranging in the 400,000 to 500,000 class the past few years, some manufacturers believe.

Sales of residential forced humidifiers were in the neighborhood of 18,000 in 1958, guesses one authority, and they very likely increased in 1959. Perhaps as many as 25,000 or 30,000 were sold in 1959, but this, too, is strictly a guess.

In a recent market analysis, one manufacturer came up with these conclusions:

Homes Built Before 1950 Are Prospects

"It might safely be said that all homes built before 1950 are prospects for automatic furnace humidifiers. Even though 70% of these homes had humidifiers that were eight or more years old, they have now become obsolete due to corrosion and other reasons. It is also safe to say that 75% of the furnaces with the humidifiers installed before 1950 are not working or have been turned off.

"Of the approximate 7,000,000 homes built between 1950 and 1957 about 60%, or 4,200,000 homes, are now prospects for humidifiers because no units were ever installed," this analysis continues. "It is estimated that 1,000,000 of these units installed between 1950 and 1957 are not working properly and need replacement."

Another manufacturer calls attention to the estimate that there are now some 19,000,000 homes heated with warm air which should be prospects for a furnace humidifier.

Some Question Need for Humidifier In Every Home

Some authorities question whether every home needs a humidifier of any sort, however, but this point will be discussed in more detail later.

It is unlikely, too, that every homeowner who is a prospect for a humidifier will want the more expensive forced type. With the occasional exception, forced humidifiers would more likely find the best market in the more expensive homes, starting at $15,000 or more.

Major sales points generally employed in promoting humidifiers relate to health, comfort, and effects on house structure and furnishings.

Most emphasis is usually placed on the health and comfort angles, despite the fact that these seem to be more difficult of conclusive proof.

The thinking with respect to health is that low relative humidity is directly related to an increase in respiratory diseases, including the common cold. Low humidity is said to cause drying of the mucous blanket in the nose, nasal passages, and the sinuses, thus permitting the growth of bacteria which are normally trapped and carried away by the mucous blanket.

Medical Authority Cited

Not too many references on the subject can be found in medical literature, it would appear, but Walton Laboratories, Inc., a long-time manufacturer of humidifiers, offers the following quotes in some of its literature:

"One of the commonest causes of nasal symptoms leading to acute sinus infections and neuralgias is failure to provide humidity in the heat of the home and office during the winter months." — Dr. Watt W. Eagle.

"A lack of sufficient air moisture or relative humidity in our well heated homes and other indoor places during the colder months, is an important factor in the causation of prolonged asthmatic attacks."—Dr. Salvatore J. Parlato.

"A dry nose is at the root of most of the fall epidemics of coughs and colds."—Dr. Arthur W. Proetz.

"The importance of artificial humidification of heated apartments in the prevention of winter colds cannot be over-estimated."—Dr. Proetz.

(Incidentally, Dr. Proetz is the M.D. most widely quoted by humidifier manufacturers.)

University of Chicago Research on Bacteria

Another favorite item in this connection refers to research by the University of Chicago which showed that a relative humidity of 45% to 55% at about 72° F. was almost immediately fatal to certain types of airborne bacteria, including one of the pneumonia germs.

*Table 1—How Industry Relates Health to Humidity**

Month	Average Indoor R.H.	Respiratory Disease Cases Per 1,000 Population
July	59%	17
August	56%	20
September	51%	23
October	40%	29
November	20%	40
December	12%	58
January	12%	92
February	14%	102
March	18%	89
April	25%	55
May	35%	35
June	57%	22

*Based on statistics from U. S. Public Health Service.

Also widely quoted is a compilation of statistics (see Table 1) from the U. S. Public Health Service which shows a sharp increase in the number of respiratory disease cases during the six winter months of the year when the indoor relatively humidity is at its lowest average —November through April.

Just how conclusive these figures may be is questioned by some, however. Very likely low humidity is a factor in respiratory diseases, but perhaps there are other contributing factors as well, it is pointed out. Such a comparison of statistics is always somewhat suspect, too, they say.

In connection with the relation of humidity to health, the following question is asked almost inevitably:

"If moisture is of such great importance to our health and comfort during winter, why then do doctors sometimes advise patients to escape the moist, humid conditions by going to Arizona? Surely, there the air is dry."

The answer given by humidifier manufacturers is typified by the following, quoted from a Walton booklet:

"When we speak of Arizona being dry, we are speaking of outside humidity and contrasting it with the high humidity experienced in some sections of the country. Still, however, the heated indoor air in the average home is dryer than the outdoor air of Arizona. Also, the variation between outdoor humidity and temperature is most constant in the dryer climates and for this reason is more beneficial to certain health problems."

Second major sales point employed by humidifier manufacturers is the matter of comfort.

The thinking here is that an individual can be uncomfortable even at an indoor temperature of 75° F. if the indoor humidity is too low in winter.

This is supposed to be result of the increased rate of evaporation from the skin that occurs as the relative humidity is lowered.

Some manufacturers also go so far as to suggest that maintaining the indoor humidity at a sufficient high level will permit a slight lowering of the thermostat setting, thus saving on fuel costs. This is not

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stressed too much, however.

In backing up this suggestion, some manufacturers refer to the ASHRAE "comfort chart" as proving the point.

Validity of this argument may be open to some question. For example, one authority states: "It is now fairly widely recognized that at temperatures between 70° and 80° F. this chart over-emphasizes the importance of humidity on the thermal comfort of sedentary and slightly active people."

The statement was made in a private communication by M. K. Fahnestock, chairman, physical environment unit, University of Illinois, who has conducted much research on the subject of human thermal comfort. He further adds:

"Within the range of dry-bulb temperatures of 73° to 75° F. our studies, and those of others, show that with sedentary and slightly active people, humidities between 30% and 80% have no significant effects on thermal comfort."

Indoor relative humidity during winter months, however, averages well below the 30% minimum cited by Fahnestock, according to the previously mentioned statistics of the U. S. Public Health Service. Such extremely low humidity conceivably may have more bearing on comfort, it would seem.

In connection with human comfort, it should also be mentioned that annoying static shocks and sparks can often occur when the relative humidity falls below about 30%. Higher humidity eliminates this.

Humidity Control Benefits House and Furnishings

Although the health and comfort sales points are perhaps somewhat controversial, there seems to be no argument about the effects of humidity on the structure and furnishings of a house.

Wood, for example, swells in high humidity, shrinks in low humidity. A door that sticks in humid weather opens freely in dry weather. The householder will no doubt like a freely opening door in winter, but, by the same token, he'll be mighty unhappy at the shrinking of wood paneling, the creaking or actual falling apart of chairs.

When the humidity is too low, such things as rugs, carpets, draperies, book bindings also suffer. Rug and carpet fibers become dry and brittle, breaking off as dust particles. Book bindings will dry out and crack. House plants can become droopy due to lowered humidity in winter.

Pianos and other musical instruments made primarily of wood are especially affected by extremes in humidity. Not only will a piano be thrown out of tune by high or low humidity, but the swelling or shrinking of its wooden parts will affect its "action" and tone and can actually cause damage.

(To Be Continued)

Dehumidifier Described

NEW YORK CITY—Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y., has published Bulletin No. 140 describing the "Hygrol" air dehumidifier.

New England Home Show Set for March 16-22

BOSTON — The 1960 New England Home Show, sponsored by the Home Builders Association of Greater Boston, will be staged in Commonwealth Armory here March 16-22.

Initial two days of this 10th annual show will be devoted exclusively to the building trade for architects, contractors, and material suppliers.

NARDA Names Pinkstaff

CHICAGO—Gail K. Pinkstaff has been appointed executive vice president and managing director of the National Appliance & Radio-TV Dealers Association, according to Harry B. Price, Jr., chairman of the executive committee. Pinkstaff succeeds A. W. Bernsohn.

FTC Guide Aimed at Combatting 'Bait' and 'Switch' Advertising

WASHINGTON, D. C. — The Federal Trade Commission has issued a four-point guide to help businessmen and the public identify and avoid "bait" advertising and "switch" selling.

The new guide also will be used by the commission's staff in evaluating what facts concerning the "bait and switch" racket constitute a violation of the law (Section 5 of the FTC Act).

Formal proceedings will be commenced against advertisers who fail or refuse to comply with the law, the agency said.

Commenting on the guide, Commissioner Robert T. Secrest explained:

"We hope that this guide will help educate the public on how the trick works and on how to avoid being victimized. At the same time, we have reason to believe that by spotlighting this evil fewer merchants will attempt to profit by it. A cheap trick that can be recognized and avoided is not profitable."

The new guide is a companion measure to a nine-point guide issued by the FTC on Oct. 10, 1958, to halt the then widespread use of fictitious pricing—namely, the use of spurious "original" prices in order to make the actual selling price appear to be a bargain, it was pointed out.

According to the standards established by the guide, advertisers must not:

1. Offer a product for sale when the offer is not a bona fide one.

2. Misrepresent a product in an advertisement with the intention of later switching customers to other merchandise by disclosing the truth about the advertised product.

3. Discourage the purchase of advertised merchandise as part of a bait scheme to sell other merchandise.

4. In the event of a sale of the advertised product, attempt to "unsell" the product with the intention of selling other merchandise in its stead.

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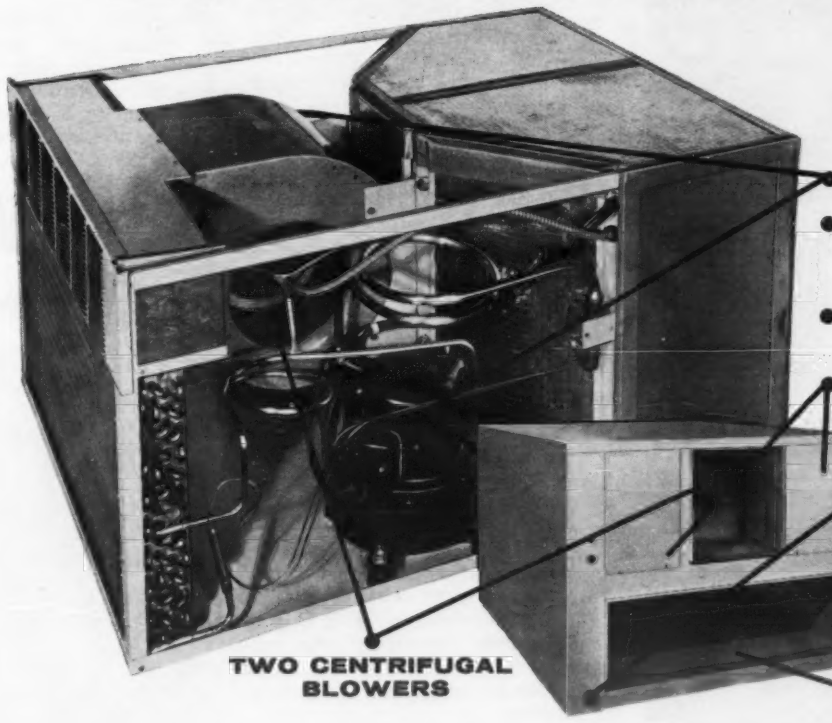
SELF-CONTAINED AIR CONDITIONER



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You keep more of the profits you make with Coolerator. They aren't eaten away by excessive service and "adjustments." Proof? *Actual service records show Coolerator equipment ranks at the top of the industry for dependable performance.* In self-contained units, remotes or heat pumps, you can't sell more service-free comfort than Coolerator. So add to your profits two ways: with (1) Coolerator quality and (2) Coolerator's exclusive Bonus Profit Plan. Mail the coupon below today!

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Activated Charcoal Aids Smog Removal

Air Purification Becoming Integral Part Of Air Conditioning In Los Angeles

LOS ANGELES—Air Conditioning Supply Co. here, one of the largest manufacturer's representatives firms in The Southland, is celebrating its first anniversary as sales agent for the "Dorex" air purification products of Connor Engineering Corp., Danbury, Conn.

The broad scope of industries and services which have recently swung to the use of activated carbon filters as "an effective combatant to odorous, gaseous and vaporous impurities (smog!)" was brought into focus by A.C.S. President Lind Davenport.

Occasion was an inspection visit to the Far West by a key executive from Connor, Henry A. Baker, vice president. Together with Davenport and A.C.S. Executive Vice President Lou Horsefield, he conducted an extensive three-day tour of recent Dorex cell or cannister-type installations.

Agenda included such diverse applications as the Jet Propulsion Laboratory, California Institute of Technology; Kraft Foods Co., Buena Park; Queen of Angeles hospital addition; and the new Los Angeles County Law Library building at Civic Center.

In the latter, the role of activated carbon in air purification is playing a major part in removing the gases and vapors so prevalent in that sector.

According to Davenport, "a sizable slice" of the new construction in Los Angeles now keying to total air conditioning also keys to total elimination of smog. He points to more than 60 jobs in a wide range of industries and services which, this past year, have completed new installations of air purification equipment or used the reactivation service of his firm.

Included on the list is what is believed to be the largest single unitary installation yet set in the West—the 140-unit Pacific Mutual office building—13-story L.A. landmark.

Weathered Worst September Smog Inside Building

Davenport points to a statement of Chief Engineer Gordon Wilson, Pacific Mutual, that "on our very worst September smog alert days, when visibility was affected and the outside air was beginning to make people downright miserable, the air inside our building had absolutely no trace of smog . . . the air was clean, pure, and invigorating."

Checked too, at Whittier, was the Fruit Inspection Laboratory, U. S. Dept. of Agriculture, "where an effective smog-control system is believed to be setting a precedent for other Dept. of Agriculture facilities in the Far West."

It has been indicated a similar Pasadena laboratory facility of the department (engaging in precise chemical composition studies on fruits and vegetables which are greatly affected by the high oxidate content almost always prevalent in that sector), will shortly update a relatively new air conditioning system to include smog elimination via activated carbon filters.

That department's ARS Western Regional Business Office in Albany, Calif. started this trend, Davenport believes, with an installation of several Dorex cannister-type units there.

Other concerns in Southern California reportedly eliminating smog via Dorex products for personnel or product protection, include:

Carnation Co., Van Nuys; Douglas Aircraft's DC-8 facility at Long Beach; North American Aviation's Downey and Inglewood plants; Lincoln Saving & Loan, L.A.

Also Maier Brewing Co., Southern California Gas Co., Playa Del Rey Pressure Station, General Felt Products, Hamm Brewing Co., and Edwards Air Force Base.

Protect Blue Boy From Smog

The famed Blue Boy "original" now residing at the Huntington Library, Pasadena, has long been Dorex smog-protected.

Other diverse applications listed by the spokesman include the entomology greenhouse at U.C.L.A.; the plant pathology building, University of California at Riverside; and the J. J. Haggerty Stores II, Beverly Hills.

Auditorium with Removable Roof To Feature 'Quiet' Ventilating Air

BALTIMORE — The new Pittsburgh Civic Auditorium, with the 12-story high removable roof, will be an engineering achievement in more ways than one when it is completed next year.

In addition to the unique convertible roof, which will need no supporting posts in the area of the audience, the auditorium will feature "quiet" ventilating air, according to the Metal Products Div. of Koppers, Inc. here.

The division announced that it is furnishing over 100 "Aircoustat" "sound traps" to provide quiet operation of the auditorium's ventilating system.

The traps are particularly important, according to Koppers engineers, because some of the large vents are necessarily located close to customer's seats. Sound from the operating equipment in the blower room, as well as the rush of air moving through the ducts, would disturb the audience—hence the sound traps, it was noted.

The Civic Auditorium will be used for such varied events as hockey, boxing, circus, and light opera.

Ice for skating will be manufactured overnight but the arena floor will be de-iced in a matter of hours. This will be accomplished by pumping hot brine through the pipes to give the floor living room warmth.

$25,000 Gift Aids Hospital Air Conditioning

CHATTANOOGA, Tenn. — A $25,000 gift by an anonymous donor will help make possible the air conditioning of nine operating rooms at Erlanger hospital, it was announced by Roy McDonald, board chairman.

McDonald said the gift "by a generous citizen of this city" and other funds available for the purpose will make the air conditioning installation possible.

With these nine rooms, to be air conditioned before hot weather next year, and the seven air conditioned operating suites soon to be opened in the new central wing, Erlanger will have 16 fully air conditioned operating rooms according to Administrator Harold Petersen.

75-Bed Hospital Cooled

THE DALLES, Ore. — The new The Dalles General Hospital, which was formally dedicated recently, is air conditioned throughout. The four-story, 75-bed facility cost more than 1¼ milion dollars.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

24 PACE-SETTING NEW D-H HIGH PRESSURE H.C.D. AIR HANDLERS DO IT ...AT NEW KROGER BLDG., CINCINNATI.

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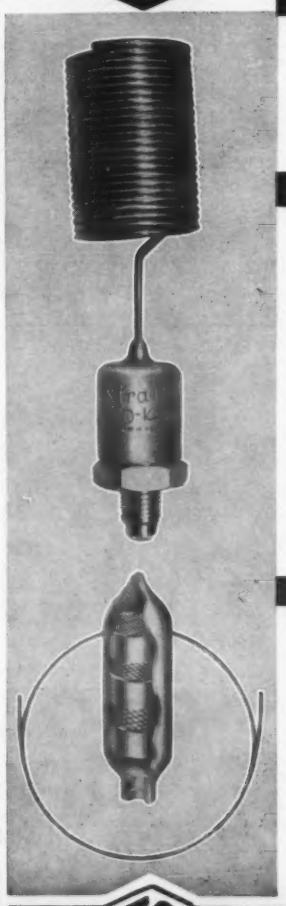

STRAIN-O-KAP® AND STRAIN-O-KAP® SENIOR
modern refrigerant metering devices

STRAIN-O-KAP—Part No. S-1 and S-2

A strainer capillary combination for refrigerators from 1/20 H.P. to 1/5 H.P., water coolers 1/4 H.P. and less, and freezer cabinets 1/3 H.P. or less. May be used with all refrigerants. Replaces high side floats, low side floats, expansion valves, restrictor tubes and original capillary tubes.
Strainer features Watsco's exclusive three stage straining action. Use part No. S-1 for solder installations and part No. S-2 for flare installations.

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For low, medium or high temperature units from 1/3 H.P. to 1 H.P. using refrigerants 12 or 22 exclusive. Triple mesh strainer is designed for 3/8" sweat connection. Incorporates a reducing bushing for installations on 5/16" and 1/4" liquid lines as well.

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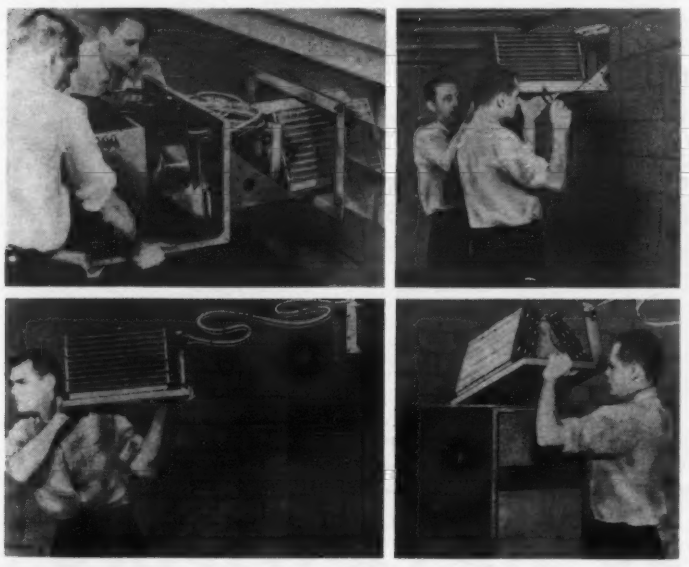


INSTALLATION STEPS for Flex-Hermetic remote air conditioner: Upper left—Sleeve or mounting plate is installed in wall and unit slipped through with weld-nuts on plate fastening to bulkhead. Upper right—From inside, the "A" coil is taken from its shipping yoke. Lower left—Tubing uncoils as section is taken to furnace. Lower right—Coil is placed on furnace. Once wired in, it is ready to go.

Fedders 1960 Lines--

(Concluded from Page 1, Col. 5)

much more than would be required of a regular through-the-wall air conditioner."

Claude C. Kirk, sales manager of the recently-formed Central Residential and Commercial Air Conditioning Dept., explained that by accomplishing the charging of the air conditioner at the factory, the unit would carry a five-year warranty on its complete hermetic system. The remainder is covered by a standard one-year warranty.

"The key to the Flex-Hermetic concept is the flexible armored tubing that connects the 'A' coil evaporator to the compressor section," it was pointed out. "For shipment, the evaporator is secured to the outdoor section and the tubing is coiled. After the compressor section has been installed, the 'A' coil is literally carried to the furnace as the tubing unwinds.

"The outdoor section can be installed either through the wall or on a concrete slab foundation. For a wall installation, a special steel Flex-Fit mounting frame is first secured through the wall and the unit is fastened to it.

"These Flex-Fit frames will be available as optional equipment and it will be possible for a builder to install the frame in a house under construction in anticipation of future use much the same as a through-the-wall air conditioner sleeve."

Kirk stated that the Flex-Hermetic concept would be a boon to whole house air conditioning because it did away with the problems and costs involved with field charging a remote system. "All of the guesswork has been taken out of the installation," he said.

He indicated the factory charging eliminated the need for such components as service valves, charge compensators, dryer-strainers, and sight glasses.

Kirk revealed that because of the completely new design and the elimination of those components required for field charging, the price on the Flex-Hermetic would be "lower than any remote air conditioner on the market." Additional savings would be realized as a result of the simplified installation procedure, he said.

A patent has been applied for the Flex-Hermetic concept.

In the Golden Era remote series, for applications requiring greater capacity, Fedders is offering four deluxe units that are charged in the field "and have, in addition to many proven features, innovations of their own."

"The 3, 4, and 5-hp. compressor sections, delivering 36,000, 48,000, and 60,000 B.t.u., respectively, have built-in anti-slugging protection to prevent damage to the compressor," it was stated.

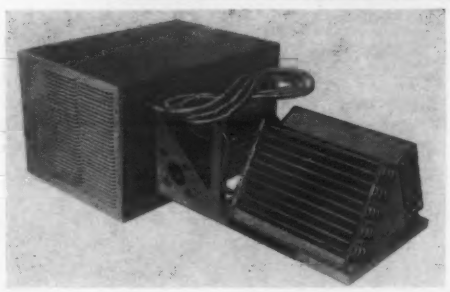
"These same models are also equipped with belt-driven centrifugal fans for quiet operation and automatic high pressure cutout controls that can be reset from the room thermostat.

"Another feature of the three larger capacity units is an upflow discharge that directs hot air away from surrounding shrubbery and wall areas. The discharge grille itself can be installed in two different positions to further control the exhausted air.

"For ease of servicing, all of the controls are located at one point behind a single access panel and are out of the air stream."

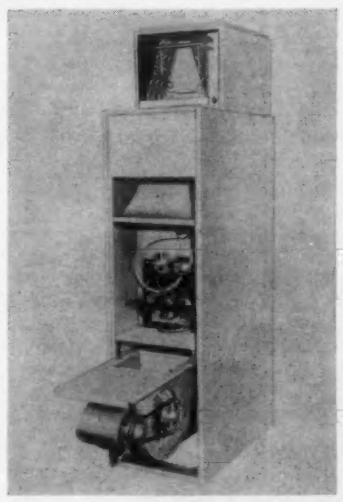
The 3 and 4-hp. units have the additional feature of built-in compressor overloads.

The 2-hp. model, with a 24,000 B.t.u. capacity, has a front-to-rear air floow and its propeller fan is driven directly by the motor. All of the Golden Era remotes are equipped with charge compensators, dryer-strainers, service valves, and sight glasses.



LEFT: Flex-Hermetic remote air conditioner model CF24.

BELOW: One of 11 gas-fired furnace models. There are also nine oil models.



The Trophy furnace line consists of 11 gas and nine oil-fired models and represents the firm's entry into the warm air heating business. Fedders has long been a producer of other heating equipment such as baseboard radiation, convectors, wall radiation, and unit heaters.

Seven of the gas and six of the oil-fired furnaces are designed as heating-cooling furnaces so that Fedders remote air conditioning can be added at any time without additional components required.

These models have a relay and a properly-sized transformer already wired into the furnace controls as well as belt-driven blowers, with variable-pitch pulleys, that are sized to perform properly during the system's heating as well as cooling functions.

The gas-fired heating-cooling units are available in 100,000, 125,000, and 150,000 B.t.u. capacities while the oil-fired models are offered in capacities of 112,000, 140,000, and 168,000 B.t.u.

In a straight heating furnace line, there are four gas (75,000, 100,000, 125,000, and 150,000 B.t.u.) and three oil models (112,000, 140,000, and 168,000 B.t.u.). Four of the units are belt driven and three have direct drive.

All of the gas and oil furnaces are shipped completely assembled and all of the controls pre-wired. The oil models stand 57 in. high while the gas is 56 in. high. The width depends on the capacity. All of the units are fully enclosed and are styled in Hawaiian Tan and Sandstone Brown enamel.

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EXCLUSIVE PATENTED
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Witt exclusive Defrostair patented Heat Trap coil requires only a low cost single pole, double throw time clock for complete automatic defrosting. Easy low cost installation. Requires no re-evaporation or special plumbing. Completely automatic. Available in 21 models ranging in BTU capacities from 1400 to 44,100 at 10°T.D. Write today for complete Witt Catalog.

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One of America's leading appliance manufacturers has an opening for a man who has proven experience in retail or wholesale appliance sales. The man we are seeking should have the ability to work with dealers through distributor salesmen and conduct product training meetings. A considerable amount of travel will be involved. This is an excellent opportunity for the right man. Salary commensurate with ability. Send resume and complete salary history.

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You Can Fabricate Framed Permanent Filters ON THE JOB!

You can make a *one-trip service call* when you use Perma-Trim Filters by Air-Con. There's no delay because you can supply any size filter within five minutes ON THE JOB! Less than $25.00 will buy the necessary tools to frame this filter. You save TIME and MONEY by fabricating Perma-Trim Filters.

Air-Con Deodorizing Filter Spray and standard size Air and Grease Filters constructed of Aluminum or Steel are available from our stock for immediate shipment. Special sizes shipped *promptly* with no handling charge for small orders. See your wholesaler or contact,

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See you Feb. 1-4 at Southwest Heating and Air Conditioning Exposition, Dallas, Texas . . . Booth 1404

Ranco Describes Heat Pump De-Icer

COLUMBUS, Ohio — How to test and apply the two Ranco D50 and D52 type de-icer controls for heat pumps, which are said to detect and clear outside coils of ice automatically in a wide geographic area, is described and illustrated in a new engineering bulletin released by Ranco, Inc.

The bulletin contains several work sheet pages to record heat pump data.

It also outlines operating control proceedings to apply the de-icer units.

Copies of Engineering Bulletin No. 1748 and two work sheets are available on request from Ranco, Inc., Columbus, Ohio. Extra copies of the work sheets, #1748-A and B, alone are also available.

Bohn Manual Is on Heating, Cooling Coils

DANVILLE, Ill. — The Bohn Aluminum & Brass Corp. has produced a new manual on its line of coils for heating and cooling.

In addition to specifications, drawings, and installation instructions, the manual includes direct selection tables for three types of steam coils, two types of booster coils, two types of water heating coils, three types of water cooling coils, and four types of direct expansion coils.

Copies may be procured through the Heating and Cooling Coil Dept., Danville Div., Danville, Ill.

Superior Catalog Gives Valve Data

PITTSBURGH — Superior Valve & Fittings Co. has announced the publication of catalog R-7 for the refrigeration and air conditioning industries.

The new catalog includes complete information on line valves, globe valves, relief valves, heat exchangers, check valves, SAE flare fittings, and related brass products.

Copies of the 20-page catalog are available—write to Superior Valve & Fittings Co., 1509 W. Liberty Ave., Pittsburgh 26, Pa.

Barber-Colman Manual Describes Controls

ROCKFORD, Ill.—A complete line of automatic control systems for hot water, steam, gas-fired, and electric unit ventilators is described in detail in the new Unit Ventilator Control Application Manual available from Barber-Colman Co., 1300 Rock St., Dept. 763, Rockford, Ill.

G-E Recorder Selection Covered

SCHENECTADY, N. Y. — "Complete Specifications for Proper Selection of General Electric Recorders" — Bulletin GEA-6933—provides buying information on its complete line of recording instruments, including dimensions and chart speeds, operating specifications, applications, features, and accessories, according to General Electric Co., Schenectady 5, N. Y.

Acme Bulletin Includes Quick Reference Chart

CUBA, N. Y.—A "quick reference chart" included in the new control transformer bulletin (14-BL01) published by Acme Electric Corp. here, shows the per cent of rated load and the per cent of secondary voltage drop for control transformers used for intermittent or duty-cycle applications.

The chart covers duty cycles in one minute intervals both "off" and "on" up to 15 minutes for each time cycle. A total of 420 calculations are listed.

"By using this chart for the proper selection of a control transformer, it may often be possible to use a much smaller size and consequently less expensive control transformer.

PATENTS have been omitted from this issue because of space limitations. This regular feature will be resumed next week.

NATIONAL AIR-CONDITIONING SALES MANAGER

This is an excellent opportunity for an individual with executive capabilities in the field of national air-conditioning appliance sales. Only individuals who are presently engaged in this work and have a proven successful work history as sales and product manager in the air-conditioning appliance field will be considered. Experience must include product planning, merchandising and sales programming of air-conditioning appliances in a nation wide basis. Must be free to travel and willing to relocate if necessary. In replying include a complete resume and salary history. All replies will be held strictly confidential.

Box No. A6449, Air Conditioning, Heating & Refrigeration News.

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KARLSON
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This is the simplest and lowest cost method for eliminating the elements that clog and damage ice cubers and flakers, coffee makers and urns, cooling towers, evaporative condensers, etc.

KARLSONITE*, a water soluble complex phosphate in crystalline form, when automatically fed into the water supply, forms soluble complexes with calcium and magnesium, holds them in suspension and prevents precipitation of these elements. Deposits already formed are redissolved. Karlsonite* also forms inert complexes with iron, copper, nickel, manganese and zinc ions. It is harmless to all metals and prevents corrosion and pitting of metals in zeolite soft water. It is harmless to septic tanks—does not build up organic sludge.

Karlson Automatic Water Conditioner is easily installed, and requires no maintenance except infrequent renewal of the Karlsonite* charge.

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WATER CONDITIONING COMPOUNDS AND EQUIPMENT

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RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

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POSITIONS WANTED

SEASONED MANUFACTURER'S representative with following. Seven years in New York area, twenty-five years' experience in engineering, sales and service. Need complete air conditioning, refrigeration and heating lines, present supply to be discontinued due to factory merger. Sales at once, references, late 40's. Write to BOX A6433, Air Conditioning, Heating & Refrigeration News.

SALES MANAGER refrigeration and air conditioning, tired of travel, wants to locate in Detroit. Twelve years' experience, heat transfer and affiliated industry. BOX A6437, Air Conditioning, Heating & Refrigeration News.

AIR CONDITIONING sales engineer with 14 years' experience promoting and selling air conditioning and heat pump systems wishes to represent manufacturer or distributor preferably west coast and central Florida. Has personal contacts with dealers, architects, engineers, utilities and school boards. Resume with best references on request. BOX A6438, Air Conditioning, Heating & Refrigeration News.

COLLEGE TRAINED refrigeration and air conditioning engineer with 15 years' complete experience, administration, sales, design, supervision and trouble shooting. Strong on industrial work of all sizes. Desire position with manufacturer or refrigeration and air conditioning contractor. New York metropolitan area preferred. Full member ASRE. BOX A6439, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION AND air-conditioning service mechanics with five years' experience in super-market field are needed to service "Acme Super Markets" in Long Island and North Jersey. Send resume to: W. COLSON, 185 Washington Street, Newark 1, New Jersey.

ICE VENDING stations, icemakers, drinkmakers. Several territories available to experienced agents with proven record for establishing and giving sales training to commercial refrigeration distributors. Our complete sales program will require a major portion your time. Telephone DANSBY A. COUNCIL, Sunset 20314, Fort Smith, Arkansas.

MANUFACTURER'S REPRESENTATIVE for commercial refrigerators and food market equipment. Expanded line of fast moving models offers good opportunity in newly created territories to handle increasing sales activity in: south eastern states, Texas area, St. Louis area and a few other territories. Reply directly, FOGEL REFRIGERATOR COMPANY, Philadelphia 37, Pennsylvania.

WESTINGHOUSE AIR Conditioning Division, Staunton, Virginia, has an immediate opening for a Development Engineer to design and develop hermetic compressor components. Machine design experience and aptitude is a prerequisite. Send resume of experience and qualifications to J. H. FYOCK, P. O. Box 510, Staunton, Virginia.

MANUFACTURERS REPRESENTATIVES and distributors to sell air conditioning and refrigeration jobbers and dealers. Complete line of quick scale removing materials and water treating chemicals. Lowest delivered prices in the industry. New polyethylene packages. Proven line. RATHBUN COMPANY, P. O. Box 5291, Houston 12, Texas.

MANUFACTURER'S REPRESENTATIVE wanted by STAR COOLING TOWERS, INC., experience in cooling tower application preferred. Open territories are: New Mexico; Colorado; Kansas; Missouri; Arkansas; Tennessee; Kentucky; North and South Carolina. Write P. O. Box 12244, Houston 17, Texas, or contact our corporation president who will be at Statler-Hilton Hotel, Dallas attending ASHRAE meeting.

EXPERIENCED AIR conditioning engineer, M.E. Degree, for exclusive Carrier distributor in south Florida, to service dealers and dealer projects. Great opportunity to become associated with top distributor in the industry. Send resume with experience and reference to: Mr. Douglas Howard, WEATHERMATIC CORPORATION, 3221 East 11th Avenue, Hialeah, Fla.

EXECUTIVE SALES position in refrigeration equipment with AAA rated national manufacturer. Areas in Ohio, Texas, New Jersey, and Illinois. Experience in commercial refrigeration sales and sales to refrigeration jobbers desirable. Complete compensation plan includes salary, bonus, and expenses. Send resume. All replies kept strictly confidential. BOX A6412, Air Conditioning, Heating & Refrigeration News.

PROJECT ENGINEER — Capable of assuming responsibility for design and development of medium size packaged chillers, packaged air conditioners and air handling units. Excellent opportunity for growth with small progressive Midwest manufacturer. Send qualifications to BOX A6432, Air Conditioning, Heating & Refrigeration News.

ENGINEER IN recently formed Research and Development section of established company. We need an alert, independent-thinking person to work on new and improved concepts of heating, cooling and combustion. Engineering degree required. Prefer one to three years' experience. Midwest location. Send resume and salary requirements to BOX A6440, Air Conditioning Heating & Refrigeration News. Our employees know of this opening.

OPENING FOR young trainee in refrigeration and air conditioning service. Requirements are technical school diploma or equivalent and at least six months' work in the field. Must have complete military service. Guaranteed 40 hour week at $1.65 per hour during training with swift advancement. Firm in southwestern Ohio. Send picture with letter to BOX A6441, Air Conditioning, Heating & Refrigeration News.

MANUFACTURERS AGENTS for Southwest, Mid-West and East to handle exceptional line of aluminum display door fronts. Application is both high and low-temperature. Some area available for upright frozen food and ice cream display cabinets. Products are excellent and priced to sell in today's market. Reply to BOX A6442, Air Conditioning, Heating & Refrigeration News.

MANUFACTURERS' REPRESENTATIVES for nationally accepted line of commercial roof-mounted heating and cooling units for Arkansas, North Carolina, Virginia, West Virginia, greater Pittsburgh, New Mexico, Arizona, Utah, Nevada, and west Texas. Write: BOX A6443, Air Conditioning, Heating & Refrigeration News.

HEAD OF test—must be experienced, able to organize test lab., make set ups, run and documented tests to Underwriters Lab., and C.S.A. on switches and controls. Need not be college graduate, if otherwise qualified. Salary commensurate with experience. South Florida location. Send resume: BOX A6444, Air Conditioning, Heating & Refrigeration News.

DISTRICT SUPERVISORS for areas with headquarters in Louisville, Ky., Memphis, Tenn., Birmingham, Ala., and Atlanta, Ga., by manufacturer of commercial refrigerators. Preferably the men we want are now selling to food market chains, supermarkets, wholesale grocers, refrigeration distributors or working for a manufacturer. They should be desirous of improving their positions by locating elsewhere or just anxious to cash in on experience and make more money for themselves. If you are one of them, send brief resume of experience to BOX A6450, Air Conditioning, Heating & Refrigeration News.

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DEALERS, DISTRIBUTORS, agents—Remote air cooled - air conditioning. Heat pumps that defrost without reversing without loss of efficiency (patent applied for). High quality, competitive pricing. Some territory in North, East, and far West open—dealers anywhere. NATIONAL THERMATIC CORPORATION, Division of JOHN FELTER COMPANY, P. O. Box 7464, Houston, Texas.

CHILLED AND hot water or direct expansion extended surface coils: 5 T.-4R—4 sq.ft. face area $117.00; 7.5 T.-4R—6 sq.ft. face area $149.00; 10 T.-4R—8 sq.ft. face area $181.00; 15 T.-4R—12 sq.ft. face area $245.00; 20 T.-4R—16 sq.ft. face area $310.00; 25 T.-4R—20 sq.ft. face area $375.00; 30 T.-4R—24 sq.ft. face area $440.00; Capacity based upon 45°R.T. & 67°E.A. w.b. 500 fpm coil face velocity. Wire * write * call for quotations for any coil requirements, ARCTICAIRE MFG. CO., 2201 Grand Ave., Tel. BA. 1-7055, Kansas City 8, Mo.

BUSINESS OPPORTUNITIES

HAVE A going heating, refrigeration and air conditioning business in beautiful Valdosta, Georgia. Will sell for thirty-five hundred dollars. BUFF'S HEATING & REFRIGERATION SERVICE, 303 E. Mary Street, Valdosta, Georgia.

COMMERCIAL REFRIGERATION, heating and air conditioning sales and service business. Major lines. 16 years in territory. Located in the Midwest. Large warehouse includes shop and office. $6,000.00 approx. inventory; $12,000.00 complete. Home optional, $9,000.00. Walk into established business. $15,000.00 down, balance 6% BOX A6451, Air Conditioning, Heating & Refrigeration News.

MISCELLANEOUS

INDUSTRY'S BEST ice maker now available if you can qualify. Three requisites are necessary to successfully merchandise an automatic ice making machine. 1. A nationally known and nationally advertised quality product manufactured by a company with know-how and known for their sincere desire to cooperate with their jobbers in protected territories. 2. A quality product relatively service free, with realistic list prices and attractive discount structure. 3. An aggressive sales and service organization who, when given territory protection can produce volume sales. We offer the first two as our part of the bargain! Can you qualify for the third requisite? Territories open, Buffalo, New York; eastern Pennsylvania and greater Philadelphia area; Boston, Massachusetts and northern New England. Write now on your letterhead to BOX A6445, Air Conditioning, Heating & Refrigeration News for complete details. Territories will be assigned prior to spring selling season.

How to take advantage of the great air conditioning sales potential in . . .

1960

THE AIR CONDITIONING "SHOW CASE ISSUE" MARCH 7

As reported in a recent issue of the NEWS

"There seems to be every reason to believe that 1960 will see sales performances exceeding those of 1959 and perhaps establishing records for almost every kind of product that the industry sells!"

As the *only* Weekly Newspaper of the Industry, AIR CONDITIONING, HEATING & REFRIGERATION NEWS covers the important trends and happenings of this booming market every week.

The annual Air Conditioning "Show Case" Issue, however, takes an additional step in providing useful and useable information to its readers who comprise the top buying influences in this expanding market. Devoted entirely to the air conditioning market (residential, commercial, and industrial), this year-'round reference issue provides:

The industry's largest and most comprehensive detailed listings of comparative specifications on all major makes and models of packaged air conditioners;

The latest facts on merchandising and selling air conditioning equipment;

Valuable sales helps to make 1960 the best air conditioning sales year yet; and

Detailed market analysis, new air conditioning applications, tested sales methods and details from manufacturers about the features of their new lines!

Here is an issue that dealers, manufacturers, distributors, and contractors look forward to receiving, studying, and retaining for constant reference in their many buying decisions. Why not take immediate action to reserve enough space to tell your complete product story in the March 7 "Show Case" Issue. Any of the offices listed below will be pleased to provide complete details!

AIR CONDITIONING "SHOW CASE" ISSUE

PUBLISHED MARCH 7

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NAHB Show--

(Concluded from Page 1, Col. 3)

exposition, which ran Jan. 17 through 21 at three locations here: the Conrad Hilton and Sherman hotels and the Chicago Coliseum.

Fedders Corp., for example, though not showing in the exposition itself, announced its entry into the residential heating field. (See story on page 1.)

Another new concept in the residential field was represented by the Arkla-Servel Model 500C 3½-ton remote absorption unit which will supply chilled water or hot water for year-round air conditioning to either central or individual room-size fan-coil-filter units. The absorption unit is water cooled with a built-in evaporative cooler.

3 Enter Heat Pump Field

Entry of three more manufacturers into the heat pump field was disclosed at the exposition. American-Standard displayed a model that will be available as a self-contained unit in 2, 3, and 4-hp. sizes and as a split system in the 5-hp. size. Delco Appliance displayed a self-contained heat pump to be produced in 2, 3, 4, and 5-hp. sizes, and Mueller Climatrol introduced its remote heat pump in 3 and 5-hp. models. All three makes are air-to-air systems.

Also shown for the first time by American-Standard and Mueller Climatrol were central type electric furnaces, and Stewart-Warner likewise introduced an electric furnace.

York Div. of Borg-Warner also disclosed its entry into electric heating with a system designed to operate in conjunction with a central type air conditioner. An electric pre-heater supplies air in the 60° to 70° range which is then further heated as needed by electric duct heaters individually controlled by thermostats. (See page 1, Jan. 18 issue.)

New air conditioning products shown at the exposition, in addition to those already mentioned, included Rheem air-cooled units in both self-contained and split-system designs, C. A. Olsen's redesigned remote air-cooled condensing units and blower-coil units, and a remodeled version of Cobell-Rangaire's evaporative condenser type unit.

New Heating Items

In the heating line there were such new items as Carrier's 80,000 B.t.u. furnace designed for use with a 2-ton air conditioner, Heil-Quaker's new oil-fired closet type furnace, Iron Fireman's oil-fired hot water boiler employing the induced draft principle first introduced on its warm air model, Morrison Steel Products' "breakaway" oil and gas furnaces which permit blower-filter section to be removed for ease of installation, Mueller Climatrol's compact builder model gas furnaces engineered for later addition of air conditioning, and Williamson's builder model furnaces.

Specialty items which also attracted show visitor attention included Carrier's recently introduced automatic air purifier, Lau Blower's central ventilating system, and Trion's new low priced ($219 and $299) electrostatic air cleaners.

Copeland--

(Concluded from Page 1, Col. 5)

ing units are compact types in sizes from ¾ hp. through 7½ hp. The new motor-compressors include "Copelametic" 7½-hp. and 10-hp. models for low temperature applications.

New high-temperature Copelametic motor-compressors extend the air conditioning line through 30 hp., from 10 hp. maximum last year. The welded hermetic line has been expanded by the addition of motor compressors from ⅛ hp. through ⅓ hp., and for air conditioning applications new "Copelaweld" (welded) motor-compressors have been developed in sizes from 2½ hp. through 4 hp. Full scale production is anticipated early this year, the report states.

"The economic development within foreign countries has resulted in increased business abroad," says the Copeland statement. Operations of foreign licensees are being expanded. Copeland-licensed manufacturers are now located in England, Germany, France, and Spain. We are presently negotiating with several prospects to establish licensees in other foreign countries."

Irradiated Foods--

(Concluded from Page 1, Col. 2)

gram of feeding irradiated foods to the troops.

The need for further research was substantiated by Walter Urbain. The Swift & Co. chemist told Congress that $600,000 of company research indicated that irradiating food does not extend marketable shelf life.

Urbain also admitted that at present irradiation was not only economically impractical but that the organoleptic changes were too great. Irradiating goods can destroy microorganisms responsible for spoilage, he said, but resultant offensive changes in taste, appearance, and texture of some foods must still be corrected.

The use of low dose radiation to prolong the shelf life of certain foods will become important in the food industry in "a reasonable length of time," Richard Morse told Congress, but a critical review has led him to believe the irradiation program needs reorientation and at least two years' research.

He also pointed out that there was no proof the Army would realize any substantial economic advantages through the use of irradiated food and there was no urgent operational requirement to rush into plant construction before completing research studies.

Although Morse doubted the possible health problems raised, such as lowered fertility in dogs, hemmorages and blindness in rats, etc., he noted that such areas as development of taste and odor of various foods; identification of certain chemical changes, development of suitable packaging methods and materials, and study of certain technical effects needed further research.

In answer to Rep. John J. McFall (D. Cal.), specific protest that $1,300,000 was spent on the project before it was halted, Morse indicated that the Army will continue to cooperate with industry in developing food radiation. (Irradiated Products, Inc. is estimated to have spent to date $133,000 helping the government on this project).

The Army, he said, will concentrate on high dose sterilization while the primary civilian interest is in low dose pasteurization of their foods to extend their shelf life. He said the two programs were complimentary.

in DUNHAM-BUSH 'GD' Product Coolers
INNER-FIN
EFFICIENTLY ENDS
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...and provides entirely separate defrosting circuits

Dunham-Bush Glycol Defrost coolers, available in floor-mounted and ceiling-suspended models, feature famed Inner-Fin high efficiency coils, one of the most beneficial advances in heat transfer.

Patented Inner-Fin construction rapidly distributes heat to points of critical frost formation, resulting in faster, more efficient defrosting with minimal rise of room temperature. Such performance is especially advantageous in warehouses holding perishables, meat-packing plants, and ice cream storage areas.

Additionally—as the 'GD' demonstrates—Inner-Fin enables more compact design and provides an entirely separate defrosting circuit . . . advantages possible with *no other equipment intended for similar application.* The separate circuit contains the glycol completely, preventing dilution of the defrosting medium and eliminating costly necessities of distilling and regular replenishment. Also prevents air contamination by the defrosting medium. (For Direct Expansion Ammonia unit, specify models 'GDA'.)

Totally, what the 'GD' offers you is an integrated combination of features engineered to maximize efficiency. Get more information on the 'GD' and other heavy-duty coolers in the complete Dunham-Bush line. Contact the Dunham-Bush Sales Engineer near you.

GLYCOL HEATER KITS
The defrost circuit comprises a glycol pump, shell type heat exchanger, timer, and magnetic contactor—all supplied as an assembled kit. To minimize glycol heat losses, station kits outside refrigerated area, as close to 'GD' units as possible. Kits available for use with electrical (GEH) or steam heating (GSC) of glycol.

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